

MARINE RECORD

ESTABLISHED 1878.

VOL. XXIV, No. 44.

CLEVELAND -- OCTOBER 31, 1901 -- CHICAGO.

\$2.00 Per Year. 10c. Single Copy

LAKE CARRIERS' ASSOCIATION.

To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interests of Lake Carriers, and to improve the character of the service rendered to the public.

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SOCIETY OF NAVAL ARCHITECTS AND MARINE ENGINEERS.

The ninth general meeting of the Society of Naval Architects and Marine Engineers will take place in New York City, November 14. Through the courtesy of the president and managers of the American Society of Mechanical Engineers, the meetings will be held in the auditorium of No. 12 West 31st street, the sessions continuing through Thursday and Friday, November 14th and 15th.

A list of the papers to be read at the meeting is attached. By direction of the Executive Committee.

W. L. CAPPS, Secretary-Treasurer.

Thursday, November 14, 1901.—Trial of Speed between the Steamers "City of Erie" and "Tashmoo," by Frank E. Kirby, Esq., member of council. Effect of Variation of Dimensions on the Stresses in a Ship's Structure," by Prof. H. C. Sadler, member. Graphic Calculations of the Stability of Ships, by Professor M. H. Bauer, member. Power Consumed in Propelling the Whitehead Torpedo at Various Speeds, by Frank M. Leavitt, Esq., member. Balancing Marine Engines, (prize competition paper). Balancing Marine Engines, (prize competition paper).

Friday, November 15, 1901.—A Brief Comparison of Recent Battleship Designs, by Naval Constructor H. G. Gilmore, U. S. N., member. Changes in Torpedo Boat Designs, by Charles P. Wetherbee, Esq., member. Late Developments in Armor and Ordnance, by J. F. Meigs, Esq., associate. Recent Experiments in Attacking Armor with High Explosive Shells, by Capt. E. B. Babbitt, U. S. A. Some Notes on Tidal Corrections, by E. A. Stevens, Esq., Vice-president. Side Launch of Torpedo Boats and Torpedo Boat Destroyers, by Asst. Naval Constructor Wm. G. Groesbeck, U. S. N., member.

THE SHIPPING BILL.

In the speech in which he opened the Ohio Republican campaign in Springfield last Monday evening, Senator M. A. Hanna touched upon the necessity of assisting the merchant marine of the United States to regain the prestige which it had before the civil war swept it away. Leading up to it he said:

"In this great industrial development we have arrived at the period, aided by our resources, and the talent, the frugality and the ingenuity of our workingmen, where we are the greatest industrial nation in the world. Our exports now exceed our imports more than \$500,000,000 per annum. The point has been reached where we must find wider markets for our products. You remember the last speech made

by President McKinley at Buffalo. It was one of the most sagacious that he ever delivered. He saw that the time had arrived when the people of this country must consider their new trade relations with the world. Our manufacturers are going into every country in the world and are successful in competition. We must have wider markets. There is one thing missing and that is the connecting link, namely, a merchant marine to transport the goods. Every dollar's worth of goods we send out goes through the hands of the foreigner. Every time a commodity moves the foreigner must take commission on it. The profit they take out by the time the goods reaches the consumer is twice that which any manufacturer wants. This is one interest of our country that has been neglected. Suppose that when the Spanish-American war broke out England and Germany had engaged in war. The products of our farms in consequence would have rotted in our storehouses because not a British or German merchant vessel would dare be seen upon the high seas. This is a most serious question for us. Our work is not yet finished. Our beloved president saw it as the dawn of the morning. The next step for our country to take is not only to establish reciprocity, but make it possible for the American flag to be seen on a merchant marine as well as on ships of our navy. Why should the stars and stripes not cover merchant vessels as well as men-of-war? If we are going to build an isthmian canal and are going to increase our navy to equal any in the world and are going to maintain our position on the firing line of the world, then we have got to maintain our position on the commercial and the industrial world. We cannot do so unless the stars and stripes are seen as often in foreign ports on merchant vessels as on the lakes and rivers of our own country."

THE PUREST IRON ORE IN THE WORLD.

For centuries the Dannemora iron ore mines in Sweden have been to the iron maker what Mecca is to the Mohammedan. It is there that the purest iron ore commercially known to man exists. The operating company is a close corporation, and the ore is sold to no one outside of it; that is, the owners all possess iron or steel producing plants, and obtain from these mines part of their supplies. They limit the production to 50,000 tons per annum, and place it at a price which might seem prohibitory, but from its quality they can afford to so charge themselves.

The ore, which now comes from entirely underground operation, is magnetite, with an average of 50 per cent. of metallic iron, and from 0.0025 to 0.005 per cent. phosphorus. It requires very little flux in the blast furnace, as the gangue is principally limestone, and the phosphorus is of that minute quantity which generally leads one to doubt the chemist's reputed results.

The mine has been operated for at least 400 years. At first it was owned by private parties, but later reverted to the government. It 1863 it was again taken by individuals, and has been successfully worked ever since. Up to 1829 the ore was disrupted by fire setting. In that year the use of gunpowder was introduced. As the present working depth is 846 feet, visiting the works seems like penetrating the bowels of the earth, and when we reflect on the great age of the mine and the primitive character of its first exploiting, we could not help feeling that from some dark corner might come the spirit of the ancient Norseman to ask why we were intruding upon its original home.—Robert W. Hunt, in Cassier's Magazine for November.

It is reported that Mr. Morgan is going to buy the White Star Line and that he will soon go to London to look after the project in person.

ENGINEERS IN THE NAVY.

The annual report of Admiral George Melville, Engineer-in-Chief of the Navy, has appeared, in which he deprecates the plan of reviving a separate engineer corps, but says that the working of the "Personnel Bill" has not been advantageous to the Navy. He advises that certain candidates at Annapolis be assigned to engineering divisions and believes that it must either come to this or that the warrant officers, upon whom is falling all the engineering work, must receive commission rank. He declares that the number of trained and expert naval engineers is being reduced speedily, and believes that something must be done to increase their numbers. Therefore he advises that a large number of junior officers be sent to the navy yards for practical engineering training; that a post graduate engineering course be established at Annapolis; that stokers be specially trained; that torpedo boats be used to train machinists and water tenders; that naval machinists be given special instructions on repair work at navy yards; that deserving naval machinists, after twenty years service be given navy yard duty; that warrant machinists be placed on the same footing as other warrant officers, and that special pay be allowed water tenders of torpedo boats.

The Engineer-in-Chief asks for a new building at Annapolis and an appropriation of \$150,000 for experimental work. He wants to test liquid fuel, the steam turbine, and electricity as a prime mover, including the storage battery. The Chief Engineer declares that the wonderful strides made by Germany in the past ten years can be ascribed in great part to the Charlottenburg experimental station.

ARMOR PLATE FOR EUROPE.

A New York telegram says: The Morgan steel trust will erect a huge plant on Staten Island with the determination of capturing European armor plate markets and of selling armor plate to the United States government at a price low enough to kill a bill expected to be introduced in Congress for the establishment of a Federal plant. A company to be known as the Anglo-American Steel Combination will shortly be incorporated, probably in New Jersey, for the conduct of this new business. The firm of Vickers, Maxim & Co are interested in the project, and have agreed to work harmoniously with Mr. Morgan. Beside the Staten Island plant the steel trust will amalgamate for the purposes of the new combination the great armor works of the Carnegie Company, the entire plant of the Bethlehem Steel Company and also the Pennsylvania and Cambria Steel Works. Export business will be specialized by this new department of the steel trust, and agents will be sent abroad to deal direct with all the European governments for the shipment of supplies for war vessel construction.

REPLACING BOILER TUBES.

The "Mittheilungen aus dem Gebiete des Seewesens" states that the result of the official trials of the Montupet water-tube boilers has not been published by the French Government. It is known, however, from previous trials that the tubes can be very quickly removed and replaced. In one of these trials, which lasted four hours, the fires were reduced, the steam pressure lessened, the boilers emptied, and a tube removed—all in the space of 15 minutes. The tube was then replaced and the steam pressure immediately restored. The total interruption to the proper working of the boiler lasted 40 minutes, and of this only eight to ten minutes were employed in removing and replacing the tube. Later, when the fires were out and the boiler had cooled 32 tubes were removed in one hour and 20 minutes. All the tubes were found to be in good condition.



BUFFALO.

Special Correspondence to The Marine Record.

The new Western Transit liner Chicago is now ready for service and will leave here this week on her maiden trip. She has been given everything that a modern craft should have and is a splendidly finished craft in every particular.

Although it has been stated that 70 cents had been paid on one or two Lake Michigan cargoes of coal, the general rate was held to be 60 cents. Other shippers are determined in their efforts not to pay the advance. It is reasonably certain, however, that the 70 cent rate will obtain within the next few days.

The wooden steamer Birkhead caught fire Tuesday while lying at Black Rock and was damaged to the extent of \$1,000. Mr. William F. Warren, of Tonawanda, owner of the Birkhead, attributes the loss to the explosion of a lamp. The fire department got the blaze under control before the lumber cargo was damaged.

Members of the Tug Firemen's and Linemen's Protective Association are making great preparations for their second annual ball, which takes place in St. Stephen's Hall, on Monday evening, December 23d. They have over a month in which to work up an interest, and the committee are confident that it will be a most successful affair.

The well-known and reliable firm of Jenkins Bros., New York, Philadelphia, Chicago and Boston, were awarded special honors at the Pan-American Exposition for their excellence of manufacture in valves, packings and rubber specialties. The firm is one of the best doing business in the country, and it is a pleasure to note the perfection of its industries in the manufacturing world.

I hear from Tonawanda that the canal rate on lumber to Albany has now jumped to \$1.75 per 1,000 feet. Yesterday was the first day that the new rate was paid this season. An addition of fifteen cents was made to the old rate of \$1.60 that has prevailed during the last two months. The cause in this advance rate is due to the probability of canal boats catching a \$2.10 rate to New York City.

The Northtown, of the Northwestern line of Chicago, arrived on Wednesday, having on board, in addition to her through cargo of 3,000 barrels of glucose and 2,300 bags of cornmeal for New York, 40,000 bushels of grain for unloading here. The Northtown will proceed by way of the St. Lawrence and go into the coast trade for the winter. Her three sister ships will go in the same trade, as they are not adapted for economical carrying on the lakes, although built for ocean, lake and canal traffic.

A libel was served this week on the steamer Saranac of the Lehigh Valley Transit Co. by deputy U. S. marshal Sturm. It was brought by F. C. Andrews, owner of the Homer Warren and the Great Lakes Towing Co., owner of the tug Erie. The libel is the outgrowth of a collision at the entrance to the harbor some time ago. The tug was towing the Saranac when the two collided with the Homer Warren, damaging all three somewhat. The Saranac libeled the tug Erie and the Homer Warren for damages, and the two vessels libeled the Saranac on counter charges.

Information is received at the Western Transit Co.'s office to the effect that another body of the Hudson's crew, which foundered in Lake Superior with all hands has been found. The body was found three-quarters of a mile from Tobacco river, on the opposite side of Keweenaw point from where the Hudson sunk. A description furnished by J. C. Thompson, the Western Transit Co.'s agent, is as follows: Weight about 150 pounds, five feet eight inches in height, light hair, large light mustache and three or four teeth of the upper jaw missing. In the pockets of the clothes were found a scarf pin, two knives and three English coins. Around the body was a life preserver marked "Steamer Hudson." The body was badly decomposed.

The lumber rate from the head of the lakes, which was advanced to \$3 a week ago, is firm and cargoes are more plentiful than vessels. Chartering has been brisk since the rate was advanced.

CLEVELAND.

Special Correspondence to The Marine Record.

Capt. F. A. Fick will take charge of one of the new Tomlinson line steamers. He was, for the past few seasons, in the Fedora.

Capt. W. W. Brown has returned from his trip to Buffalo, where he has been looking after repairs to the W. H. Gratiwick. The estimated damage is about \$25,000. The steamer will be discharged, dry docked and put in as good condition as formerly.

It is certain that in some few instances \$1.10 was paid on ore, the going rate is still quoted at \$1 and business is yet being done at that figure. The 3 cent rate on grain from Lake Superior is equal to \$1.10 on ore and that rate may prevail. The Escanaba figure is at 70 cents.

A meeting of the directors of the Cleveland & Buffalo Transit Co. was held here on Wednesday and the regular quarterly dividend of 1¼ per cent., payable Nov. 1, was declared. Much credit must be given Manager Newman for his great success in establishing the line and making it a paying property.

Catalogue D, pneumatic tools, hammers, riveters and drills, contains a finely illustrated account of the productions of the Cleveland Pneumatic Tool Co., Cleveland. The tools are described in detail and there are many half-tones showing the appliances at work on steel structures, dies, castings, boilers, etc. The firm manufactures air hoists, holders-on and painting machines, in addition to those already mentioned.

The following meteorological observations are furnished by the office of the U. S. Weather Bureau for the week ending Oct. 30: Prevailing wind direction during the week, S. E.; highest velocity, 24 miles, from S. E., on Oct. 29. Mean temperature for the week, 53; highest temperature, 76, on Oct. 30; lowest, 36, on the 25th. Sunrise and sunset data computed for local time: Nov. 1, sun rises at 6:33, sets at 4:55; Nov. 4, sun rises at 6:37, sets at 4:52; Nov. 7, sun rises at 6:40, sets at 4:48.

The demand made by the seamen for an advance of 25 cents per day was met by owners this week. The Lake Carriers' Association took no action on the matter. The masters and owners were notified of the action taken by the union, Monday night, and it was decided that the season was so short that no meeting of the Lake Carriers would be called and that each owner make his own arrangements with the men. Seamen on steamers and consorts will be paid \$1.75 a day and the rate fixed for sailing vessels is \$2 per day. A member of the Lake Carriers' Association said that no fall schedule of wages was adopted because the card has been higher all season than is usually paid and it was thought the men were satisfied.

A dispatch having been received from Chicago indicating that sailors are asking \$2 on board steamboats and barges, it is learned that owners of vessel property will now abandon the system in vogue of paying the men all the season through, and will discharge them as soon as the boats get to the docks, and will hire others when they want to go out. Thus if a boat lies at a dock for four or five, or even more days the men who worked upon her will be out that much pay. This system was formerly in vogue generally on the lakes, and the reform was only worked when the Vessel Owners' Association was formed. This system was generally found to pay the men better in the long run as well as to keep steady men under pay all the season. The new idea may permit of a higher rate per day, but there will be much lesser earnings in the aggregate.

This is a hard old blow to be given this port, and might perhaps be looked into by a committee of the Chamber of Commerce, at least it ought not quite to go unchallenged: "Complaint is made, and it must be of some proportions or it would not be reproduced in the columns of the Black Diamond, that a certain oil and grease concern of Cleveland, O., has made and is making requests for prices on anthracite, and, upon receipt of quotations, places an order. Upon receipt of the coal and when payment is demanded, this firm offers oil or grease in settlement of the account. It appears to the writer that this is a most peculiar method of doing business, is more than absurd, and one not justified, because in this twentieth century cash or its equivalent is the only recognized medium of settlement of indebtedness. The idea of telling a seller to accept oil or grease as payment for coal, or to take his goods away, appears to the writer to belong to some backwoods settlement, and not to a firm in a live, progressive city, such as Cleveland, O. Eastern coal firms will please note."

DETROIT.

Special Correspondence to The Marine Record.

The crew of the steamer Seattle, Capt. Still, were discharged here on Monday after making a general kick. A new crew was shipped, or at least five of the body of men, and the vessel proceeded with her fresh hands.

The Limekiln Crossing brings up a number of vessels and it is figured that in the past sixty days, wrecking, lightering assistance and repairs will foot up about \$150,000 for this locality alone. This gateway to the Northwest seems to be somewhat inadequate to the needs of commerce.

A new chart in colors of Fairport Harbor, Ohio, has just been issued and is now on sale at the U. S. Lake Survey office, 33 Campau building, Detroit, Mich., at 12 cents per copy; also a new chart in colors of Muskegon Harbor, Lake Michigan, including Muskegon Lake, at 15 cents per copy.

Capt. Foley, who was in charge of the steamer Bon Voyage, when she burned on Lake Superior, costing the lives of several passengers, whose license was suspended by the steamboat inspectors at Marquette has filed notice of an appeal of his case before Supervising Inspector Westcott, here.

As a representative of the underwriters, Capt. Tuttle, of Cleveland, did excellent work in floating the steamers Vega and City of Cleveland, this week, he is, however, very sore on the condition of the Linekiln Crossing and the Government work being carried on there, as it might be done much better.

The following meteorological observations are furnished by the office of the U. S. Weather Bureau, Detroit, for the week ending Oct. 29th: Prevailing wind directions for the week, N. E.; highest velocity, 30 miles, west, at 2:22 p.m., 23d. Mean temperature for the week, 52°; highest temperature, 78°, on 23d; lowest, 35°, on 25th.

President Wellington R. Burt, of the Ann Arbor railway, said recently: "The contract for the Ann Arbor's new car ferry has not been let. We expect to let it in the near future, but the announcement that the boat has been contracted for is not true. The Ann Arbor needs a new ferry on account of the growth of its large increase in trans-lake business, and a new boat will soon be under construction."

The steamer City of Cleveland was placed in drydock on Wednesday and an examination of the hull showed a hole in the bottom plating amidships under the shaft, four feet in diameter, besides numerous dents extending to the keel. Fifteen plates on the starboard side must be removed and a couple on the port side will be taken off. The steamer will be in dock a week and she can be ready for service again a few days later if the management desire.

Two scows have been built by Frank Perry, of Sault Ste. Marie, for the transportation of pulp wood across Green Bay. Heretofore the wood has been rafted and hauled by tugs. The speed in this way, however, is about one and a half miles an hour, and there must have been serious losses on account of storms. The scows are much more speedy, and, as they can carry 400 cords each, they promise to show a better business. The innovation makes possible the filling of some large contracts which it was feared would have to go over to next season.

Mr. Walter Oades, says: "I noticed in the RECORD of the 24th that you said the Lady Francis was the largest yacht in the world driven by a gasoline engine. If I am not mistaken the yacht Ivy, of Detroit, is larger than the Lady Francis, being 66 feet long, 11 feet 6 inches wide and drawing five feet, or is 4 feet molded depth, as she has a slug of a foot. The Ivy's frames are much heavier and she is built stronger than the Lady Francis. The latter yacht was built of light stuff, but furnished with mahogany so as to make her look well. The Ivy, when she comes out in the spring will be driven by a 60 horse-power Wolverine engine. She now has a 36 horse-power which drives her 10 miles an hour.

It is now on the boards that the Grand Trunk railway system, the Botsford-Jenks Co., of Port Huron, has completed the details of a scheme that will give that road a continuous chain of connections for the shipment of grain from Duluth and Port Arthur elevators to Leith, Scotland, where a new elevator has just been finished. A steel shipbuilding plant will be constructed at St. Clair, Mich., and eight boats built to carry the grain from Duluth to this point, where a new elevator will be built. The grain will be carried to Portland, Me., via the G. T. R. and transported from there to Leith in steamers owned by the Grand Trunk system. The new company will also look for other shipbuilding contracts and intend to enter the field as skilled and expert shipbuilders in all departments including, of course, engines and boilers.

CHICAGO.

Special Correspondence to The Marine Record.

The Frederick B. Wells, built at the South Chicago yards of the American Ship Building Co., registers 4,897 tons gross and 3,630 tons net.

The Lockwood, after being ashore at Milwaukee and released, will have to stand a repair bill of about \$75,000. A part of this will be changed to wrecking expenses.

Grain rates were advanced on Wednesday to 1 3/4 cents for wheat and 1 1/4 cents for corn to Lake Erie. The rates now seem as if 1 1/2 will be paid on wheat before the end of the week.

The following meteorological observations are furnished by the office of the U. S. Weather Bureau for the week ending Oct. 30: Prevailing wind directions for the week, N. E.; highest velocity 38, N. E., Oct. 27. Mean temperature for the week, 56°; highest temperature, 82°, on 23d; lowest 42°, on 25th.

It is understood that the steamers Williams and Easton of the Williams Transportation Co. are to be sold as soon as the contract for the company's new boat is placed. The City of Kalamazoo, it is said, will be practically rebuilt during the winter and given more cabin room for the purpose of using her as a night boat.

The Chicago branch of the Lake Seamen's Union has advanced wages on steamers 25 cents per day to take effect in accordance with action taken by the unions at Buffalo, Toledo, Milwaukee and Ashtabula, and is intended to prevail all over the lakes. Union sailors on steamers will receive \$1.75 for the rest of the season. Wages for sailors on schooners are \$2.00.

While bound down the river with a cargo of grain from the north branch on Wednesday the steamer Roswell P. Flower came to a sudden stop on La Salle street tunnel. After working on the steamer for half-an-hour she was released by the tugs Green and Dickinson. Water in the river is at a low stage on account of the strong southerly winds, and it is said that the drainage canal is not helping the depth anything as the inflow is certainly being taken away.

The first waterspout on the east shore of Lake Michigan was sighted between South Haven and Saugatuck last Thursday. Tons of water in the form of a round column shot up into the air fully fifty feet. The little steamer Alebar, which operates between Saugatuck and South Haven, suddenly encountered the waterspout. Tons of water fell upon her decks and for a few minutes it was thought the boat would sink under the weight of water. No sea prevailed and the steamer continued on her journey to South Haven.

The Chicago Pneumatic Tool Co., of this city, has added catalogue No. 15 to their list of pamphlets pertaining to pneumatic appliances. The illustrations show the tools in operation on steamships, structural work, pressed steel cars, salt mines, boilers, etc. The company announces the award of a gold medal for pneumatic tools and a silver medal for the exhibit at the Pan-American Exposition. The catalogue should be sent for by those interested in pneumatic tools, though I presume that the company has fairly well covered the ground in so far as shipbuilders, engine builders and boiler works are concerned.

A notice to vesselmen has been sent out by Isham Randolph, chief engineer of the drainage canal, warning against loading too deep for the south branch of the Chicago river. The notice reads as follows: "The past midsummer level of the lake gave a good stage of water over the Washington street tunnel, but the annual recession has reduced that stage to an extent that should be carefully noted by vessel owners loading in the south branch of the river. The depth over the tunnel in the west draw is only seventeen feet with the water at datum, and that depth for a width of only twenty-eight feet. Conditions in the east draw are much worse."

The formal investigation of the charges preferred against local Steamboat Inspectors Richardson and Moore by the Barry Bros. was begun by special agent of the Treasury Department, J. J. Crowley. The hearing of this evidence will go on this week and then the inspectors will be given a chance to make their defense. Usually affairs of this kind are investigated by the supervising inspectors, but an exception has been made in this case. It is not likely that Mr. Crowley will make known any of his findings, but will report directly to the Treasury Department at Washington. The general workings of this branch of the Treasury Department under Capt. Dumont are held as a sort of a one man secret service bureau and politics pulls like a plaster, or half a dozen of them. It is said that the trouble arose

over the action taken against the steamers Robert E. Burke and State of Michigan. C. H. Westcott, of Detroit, supervising inspector for this district, was in Chicago last week, but gave no hint of his mission to people outside of the inspector's office. The rules of the service forbid the local inspectors from discussing department matters, but it is generally believed that the charges have not been given to Richardson and Moore for their answer.

It is expected that the Lake Superior lumber rates will go up to \$3.50 per M feet in the course of a few days. The season is getting late and shippers have plenty of material to ship before navigation closes, and after Nov. 1 it is expected that the higher rates will be paid without any grumbling. At lower lake ports it is said that nearly all lumbermen are short of the commodity and are beginning to rush in their supply for the winter months. Lake Michigan rates have advanced from 12 1/2 to 25 cents per M feet within a week, and there is a bigger demand for sailing vessels than can be supplied. Menominee, which is the basing point for this lake, is paying \$1.75 per M feet on dry pine cargoes. Hard wood loads are now commanding \$2.50 and cedar ties and posts have advanced 1 cent and 1/2 cent respectively, to 9 cents and 5 cents.

DULUTH-SUPERIOR.

Special Correspondence to The Marine Record.

Compared with what Duluth usually expects in the wheat trade during the fall months, this fall can come pretty near being called a dead one.

Some charters have been made here this week at \$1.10 on ore and 3 cents on grain. Detention at discharging ports is the worst feature in the business just now, as it has been all season.

About 14,000,000 feet of lumber went up in a blaze last week at the Alexander-Edgar Co.'s mills, Iron River. The fire engines from Superior were invaluable in preventing the fire from spreading. It is estimated that the loss will amount to \$300,000, as over 400 piles of lumber were burned.

The intermediate crank-pin on the steamer Frank Rockefeller broke when that boat was fifteen miles from here on her way to Lake Erie with a cargo of iron ore. The signals of distress hoisted on the disabled boat were seen and a tug was sent from here in response to a telephone message. Repairs will take two or three days and she may not get away before Monday next, though every effort will be made to have her ready to leave on Saturday.

LETTERS AT DETROIT MARINE POST OFFICE.

OCTOBER 30, 1901.

To get any of these letters, addressees or their authorized agents will apply at the general delivery window or write to the postmaster at Detroit, calling for "advertised" matter, giving the date of this list and paying one cent.

Advertised matter is previously held one week awaiting delivery. It is held two weeks before it goes to the Dead Letter Office at Washington, D. C.

Baxter Wm. T., Hattie	Lumby Geo. W.
Booth Geo.-2, Briton	Lyons Robt. W.
Bullock Jas., City of Genoa	Mills Jos., Spencer
Bauhoff Ed., Wyoming	Malott J. W., Fedora
Ball Fred., Minneapolis	Mercier Calix, German
Balfour Jas., Neshoto	Mountain James, Montgomery
Brown Daniel D.	Martin James, Case
Cosgriff John, R. Fulton	McEachern Alex., Bermuda
Comairi Jas.	McCarthy Wm.
Carter Frank, S. Mitchell	McLeod Alex., Pabst
Cottrell Frank, Sauber	McLarty A. J.
Campbell Edw., Quito	Neri John
Corbett Jerry, Hoyt	Nielson Niels M., Ed. Kelly
Cannen Jno.	Nilli Loo, Haskell
Duell Walter, Spencer	Noel Jos., Yosemite
Driscoll P.	Palmatteer Geo., Armenia
Dawson Harry	Padden Elmer
Danners Richard	Rose Frank, Continental
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Hatch Ester J.-2, Shenandoah	Tisdale Edwin, D. P.-4-134
Hinman Mrs. E.-2, Colonial	Verner Mrs. M., Mowatt
Johnson Jno. C., R. Richards	Wilson Geo. B.
"Geo.	Warner Clarence
Kervin Geo. H.	Welch Chas.
Law Luie, Bradley	Warwick Frank
Lyons M. J.	Welch Geo.-2, Rees
Leunceford Geo.	Williams Jno., Manola
	F. B. DICKERSON, P. M.

NOTES.

THE article written by Capt. William J. Goodman, on "the gradual disappearance of the sailing-ship" and published in this issue of the RECORD from the columns of the Commercial News, San Francisco, is worthy the attention of all our readers.

JENKINS BROS.' valves, manufactured of the best steam metal and guaranteed, have been awarded the following prizes for their goods at the Pan-American Exposition just closing at Buffalo, N. Y.: Gold medal for Jenkins' Bros.' valves; gold medal for Jenkins' '96 packing; two silver medals for rubber specialties.

THE Shelby Steel Tube Co. advise us that after November 1 the sales office of the company will be consolidated and transferred to the Empire Building, Pittsburg, Pa. The seamless steel tube portion of the business is reported as gaining steadily in favor and demonstrating the excellence and superiority of their manufacture.

ONLY two of the nations having any commercial marine had a lower record than the United States in the tonnage of shipping passing through the Suez canal for the year 1900. This country stood twelfth in the list, the record being but six-tenths of one per cent. of the shipping passing through this great waterway. Turkey and Belgium are the only two nations with a more meagre showing in this connection. Japan, Italy, Spain, Denmark and Norway exceeded our record. Great Britain is credited with 56.7 per cent. and Germany with 15 per cent.

A GOLD medal has been awarded The Continental Iron Works, of New York, Borough of Brooklyn, for the Morison suspension boiler furnaces exhibited at the Pan-American Exposition. These furnaces are in great favor for land and marine boilers. Their form of construction offers the greatest possible resistance to distortion or collapse and a freedom from leakage not to be obtained in furnaces which consist of sectional flanged and riveted cylinders, reinforcing rings interposed between the flanges, or any other method. The Continental Iron Works are the sole manufacturers in this country of the Morison suspension furnace.

THE first submarine boat built for the British Navy was launched at Barrow on Oct. 2. It is one of five, which have been ordered by the Admiralty, and the construction of the vessel is treated with as much secrecy as possible, no announcement of the launching having been made to the public. A new implement of naval warfare, said to be more valuable than the submarine boat, has engaged the interest of English experts. It is called the "Actinaut" and is described as "a kind of torpedo," containing motive power operated and controlled in a manner analogous to the Brennan and Sims-Edison torpedoes. But, instead of wires being employed, the impulse is communicated by a system analogous to wireless telegraphy, and the operator may be on shore, on board ship or even aloft in a balloon. The apparatus is small and light, and can be fixed almost anywhere.

TREASURY DECISIONS.

WHEN IMPORTATION IS COMPLETE—ISSUANCE OF PERMIT FOR DELIVERY.

GOODS IN BOND—LIABILITY TO CHANGE OF DUTY.—As long as goods remain in the custody of the officers of the government they are to be deemed in a "bonded warehouse," so as to be affected by any new legislation in relation to duties which Congress may adopt.—*Hartranft vs. Oliver* (125 U. S., 525; 8 Sup. Ct. Rep. 958) followed.

WHEN IMPORTATION IS COMPLETE. When the government ceases to exercise control over imported merchandise, and delivers it over to the importer, the act of importation is complete, and the rights of both the government and the importer become fixed and determined, and will be unaffected by a change in the rate of duties.

ISSUANCE OF PERMIT OF DELIVERY.—The issuance of a permit for delivery to the merchant of his imported goods, whereby he is enabled to withdraw them without further permission of the officers of the customs, is, in legal effect, a constructive delivery of the merchandise and brings the custody of the government to an end.—A change in the rate of duties occurring thereafter will not affect such merchandise.

UNAUTHORIZED ISSUANCE OF COASTING LICENSE.—It seems that if a collector of customs, without authority of law, grants a coasting license to a schooner to proceed to another port of entry, and the vessel so proceeds and discharges her cargo, the act of thus making an illegal voyage does not affect the dutiability of the cargo.

Before the U. S. General Appraisers at New York, October 17, 1901.

The Lachine canal will, until the close of navigation, open for traffic on Sundays, as well as week days. This is for the purpose of transferring the cargoes of grain and lumber to the ocean vessels, so that the latter will not be delayed during the severe weather.

GRADUAL DISAPPEARANCE OF THE SAILING SHIP.

OBSERVATIONS ON A TRIP ABROAD AND REFLECTIONS ON THE INCREASING USE OF STEAMERS.

(Written for the Commercial News, San Francisco, by Capt. William G. Goodman.)

The sailing ship is being slowly displaced in the ocean carrying trade by cheaply built, large carrying, and economically managed freight steamers. A visitor to the great shipping ports of the world cannot fail to observe that this statement is a matter of fact. And although our port of San Francisco is among the last to feel the effects of steamer competition, yet we have for an object lesson before us a fleet of large carrying steamers that are not here by accident, are not all discharged transports out of work, but have deliberately come to this North Pacific coast from far distant ports in ballast, and have accepted in most instances about the same rates of charter as the sailing ships.

Much as the old out-of-date shipowner and shipmaster may deplore and lament the degeneracy of the times when a floating "steam-kettle" is given the preference over a handsome clipper ship, it is as certain as anything can be that steamers have come to stay; and it is after all a question of evolution and the survival of the fittest. The greatest and busiest seaports of the world are already given over to the steamships.

To those who regret the passing of the sailing ship there will be one great consolation, that "sailors will go, too," and in future the crews of the ocean tramps will be nothing more than sea laborers.

The American sailing ship has been on the decline since the beginning of the Civil War, which has been generally considered as one of the chief causes of that decline. But it is not doing justice to the bustling activity of the American business man to say that the capture of between two and three hundred, mostly small and a great many of them old, vessels and the sale of perhaps sixty or more good and larger vessels should permanently cripple a great nation's mercantile navy, if in the judgment of the shipowners, shipbuilders and business men generally it had been considered a profitable venture to build and replace those which had been lost, more especially as every other industry which had been suspended or crippled by the operation of war had in a year or two, like the cotton raising business, for instance, more than doubled in value the best year's crop previous to the war, the shipping would have revived along with all the other great industries of the nation if it had been considered profitable. The reaction following the civil war, when low freights prevailed for several years operated as a discouragement to shipbuilders, the overland railroad to the Pacific and the opening of the Suez canal and the increasing use of steamers, all operated to the detriment of American shipbuilding.

THE PORT OF NEW YORK.

On a recent visit to the city of New York after an absence of more than thirty years the writer was almost startled at the altered appearance of the port, the wharves on the East river side for three miles, once crowded with sailing ships, are now nearly all housed in and used for local river and coasting steamers and barges. The beautiful clipper ships of the several lines of California packets have long since been scattered and departed forever, some wrecked, burned or otherwise lost or sold to foreigners; and the wholesome and powerful old ships of the various lines of London, Liverpool and Havre packets have also disappeared, a few of them still in existence dragging out the remainder of their lives in the inglorious duty of a coal hulk in some obscure foreign port. One of the famous old Havre packets is doing duty as a combined coal barge and hopper in this port, and looking at the present remains of this old craft, the Germania, who would believe that such a sorry looking vessel could ever have been alluded to as "a magnificent

specimen of American naval architecture." Yet this old ship has a record of thirteen days from New York to Havre in 1859.

As evidence that profitable employment was the principal necessity for the upbuilding of the ocean-going mercantile marine of the United States, it may be stated that a large number of very handsome ships which had been built in the '70's and '80's, and in some cases as recent as the '90's, are now masquerading as schooner-rigged barges, being towed to and fro between the Atlantic ports loaded with coal, in disguise as it were, as if ashamed to be seen by their old friends, their owners deeming it wiser to either sell them outright or more profitable to use them as coal barges in preference to sending them off on long voyages under the proper ship rig; and as a further instance of the good judgment and sagacity of Eastern sailing ship owners, last year they got rid of a fleet of large, handsome, good but elderly ships to Pacific coast buyers and themselves went into the steamship business. The same causes and effects are going on in the principal ports of the world. Liverpool for ocean commerce forty years ago was the busiest port in the world within its great stone docks, great at that time in comparison with the size of the ships of that period but not so compared with the ships and steamers of the present day; within its docks could be seen the very best of the ships of

not occupy as much space as ten 1,000-ton ships, which was above the average capacity of sailing ships of forty years ago; and she does her work with less fuss and expense than the collective ten small ships; and while the Liverpool docks of long ago were always crowded with the small ships of that period they are not so now; that more business is performed in a concentrated way by the use of immensely larger ships. Some of the docks are too small for the accommodation of the great ships of the present day and several of the smallest have been filled up or used as graving docks on both sides of the river, and larger docks have been built in their place.

The Manchester canal takes away fully one-third of the trade of the Mersey, formerly done at Liverpool. But the accommodations of the Liverpool docks would be unequal now to the task of taking care of all the trade of the river Mersey. The Manchester canal has had considerable influence in favor of building ocean freight steamers instead of sailing vessels. The approaches of the river Mersey have been vastly improved since my recollection. Forty years ago vessels of heavy draft only ventured to make the port at or near the time of high water and this peculiarity of a lack of water on the bar except at high water has been the indirect cause of the loss of many fine ships; one of which recurs vividly to my memory, that of the handsome, full-



THE OLD METHOD OF DISCHARGING ORE AND COAL BY STAGING AND WHEELBARROWS.

all nations, a goodly proportion of which and the handsomest of all were admitted to be the American ships, then and for many years before and after, the model for all others to imitate or emulate, but which none could excel. They have all vanished.

THE PORT OF LIVERPOOL.

The city front of Liverpool at my first visit there in 1859, to one entering the river from the sea presented the appearance of a dense forest of ships' masts for a space of about five miles, with smaller clusters here and there on the Cheshire side from Birkenhead to Runcorn. On a recent visit there after an absence of forty-one years, the change appeared even more surprising than that of New York. The city front looks naked and bare; instead of the long rows of ships' masts which I had remembered, a few slim poles belonging to some 5,000 to 10,000 ton steamship hiding behind the long rows of warehouses, were only to be seen appearing over the roofs of these warehouses. To those old-fashioned, out-of-date people who imagine because sailing ships are getting out of favor that the commerce of the world is going to perdition it may be well to say that it is generally allowed that one ton of a ten-knot steamer is equal to about two and one-half tons of a sailing ship. So that the 10,000-ton freight steamer can, in a given time, do the work of 25,000 tons of sailing ships, except on the longest voyages. This 10,000-ton steamer, though large, does

rigged steamship Royal Charter, with over 450 lives, because I was in the port of Liverpool at the time, October, 1859, and passed by the remains of the wrecked vessel a few days after.

LONDON.

London, much like Liverpool, is bare of sailing ships. On my last previous visit, 1863, the American civil war was going on. The Victoria docks were crowded with the choicest specimens of American ocean-going ships, most of them for sale; all of them kept in port for fear of confederate privateers, which had been prowling around the British channel. In this year of our Lord, 1901, the change is very marked, a few ships only are to be seen in any of the docks, and the general aspect of the sailing ships in the London docks very much resembles that of a coconut grove at Waikiki, near Honolulu, described by our old friend Mark Twain as appearing like an "inverted feather duster struck by lightning." The sailing ships are disappearing, but their places are better filled by steamers. An American sailing ship in a British port is something very rare in these days. Months pass in some of the most prominent ports without an American vessel putting in an appearance. At the time of my visit, a few months ago, there were only three square-rigged American vessels in the ports of the British Islands, two of them from San Francisco at Liverpool, Roanoke and Susquehanna, and the Adam W. Spies at Barry.

The increasing size of ocean-going ships and steamers has made it necessary to build larger docks near London for their accommodation, nearer the sea; and the very largest ships and steamers no longer come to the old London docks. The old fourteenth century customs still existent, with vexatious delays and heavy charges and the further ante diluvian custom of giving the Thames watermen the freedom of the river, whereby they can, as lightermen, take cargo from a ship moored in the river and land it on any of the dock quays free of toll, has resulted in so diminishing the revenues of the dock companies that they have no funds wherewith to make needed improvements. And the warehouses surrounding the London docks are so hemmed in by the very narrow streets, so restricting the traffic that goods put into these warehouses on the dock side may not reach the delivery side and the consignees for three months, and one result of this state of things is that merchants desiring goods from distant foreign ports can have them delivered in London by way of some continental port, such as Havre, Dunkirk, Antwerp, Hamburg, Bremen, by the local steamers and landed at their private wharves, avoiding the London docks, and these goods will come to hand in shorter time with less trouble and expense than if landed directly by the importing ship in London dock warehouses. And so all the ports mentioned are prospering at the expense of

The coal ports of South Wales, Cardiff, Swansea and Newport still derive their principal support from coal, no manufacturing of any importance at these ports, except smelting works at Swansea. The sailing ships visiting these ports are fast dwindling in numbers. The great ships that sail from Pacific Ocean ports loaded with wheat and flour are generally required to call for orders at some convenient ports as Falmouth or Queenstown, and sometimes have to deliver their cargo to some little outport, where they still excite the wonder and admiration of the country people. There has been a slow but gradual improvement going on in these Welsh ports since my first acquaintance with them in 1859. Cardiff, when I first visited there, could not have had more than 8,000 or 10,000 people; now it has more than 150,000. The town of Penarth, near Cardiff, then a small hamlet, has nearly as many people as Cardiff had when I first knew it. * * *

Glasgow, in Scotland, still holds its own as being the largest iron and steel shipbuilding port in the world. All the improvements visible have been made within my memory of this place, dating back 39 years. It has steadily advanced in population until it is now ahead of Liverpool and Manchester, and is far ahead of them in the number of its manufacturing of various kinds, but it particularly excels in its shipbuilding yards, which are celebrated the world over.

years, French shipbuilders and owners, stimulated and encouraged by a generous bounty, which enables a ship to make a fine profit, even if they have to go in ballast on the longest voyages, providing they bring back a cargo to a British or European port, have commenced building sailing ships. The spasmodic attempt to resuscitate their dying mercantile marine has come 25 years too late, and when the people object to paying this bounty any longer, which will be in a very few years, there will be French ships for sale.

The Germans have been buying sailing ships and steamers from the British and Scotch yards until a few years ago, but that is over and past, and the German shipbuilders now turn out ships and steamers from their own yards equal to any in the world, and several of the German Atlantic steamers have held the record for fast passages across the ocean for many years past.

GERMAN PORTS.

The German ports of Hamburg and Bremerhaven still put on a brave appearance as shipping ports for sailing ships, but here, as elsewhere, it is plain to be seen that the steamship is gaining ground very fast. Very few people in this community realize the importance of California and the other Pacific Coast states in the ocean commerce of the world. On my last visit to Queenstown, Ireland, there were only five large foreign-going vessels in the harbor, all of them from

the Pacific Coast, viz., three from San Francisco, one from Columbia river and one from Tacoma, Wash. For the past thirty years the British shipowner has depended on his California or Oregon wheat charter as a profitable rounding up of his twelve months' voyage. Ships are started out from England to Australia at a nominal rate of freight, sometimes not enough to pay for handling (to say nothing of profit). From an Australian coal port to San Francisco he may make enough to pay his expenses, but his homeward bound wheat charter he expects to pay him for his year's work. The profitable sailing ship of the future to compete with the steam tramp ought to be of not less than 5,000 tons capacity even then would not be able to do so successfully except on long voyages.

THE COMMERCIAL BATTLE GROUND

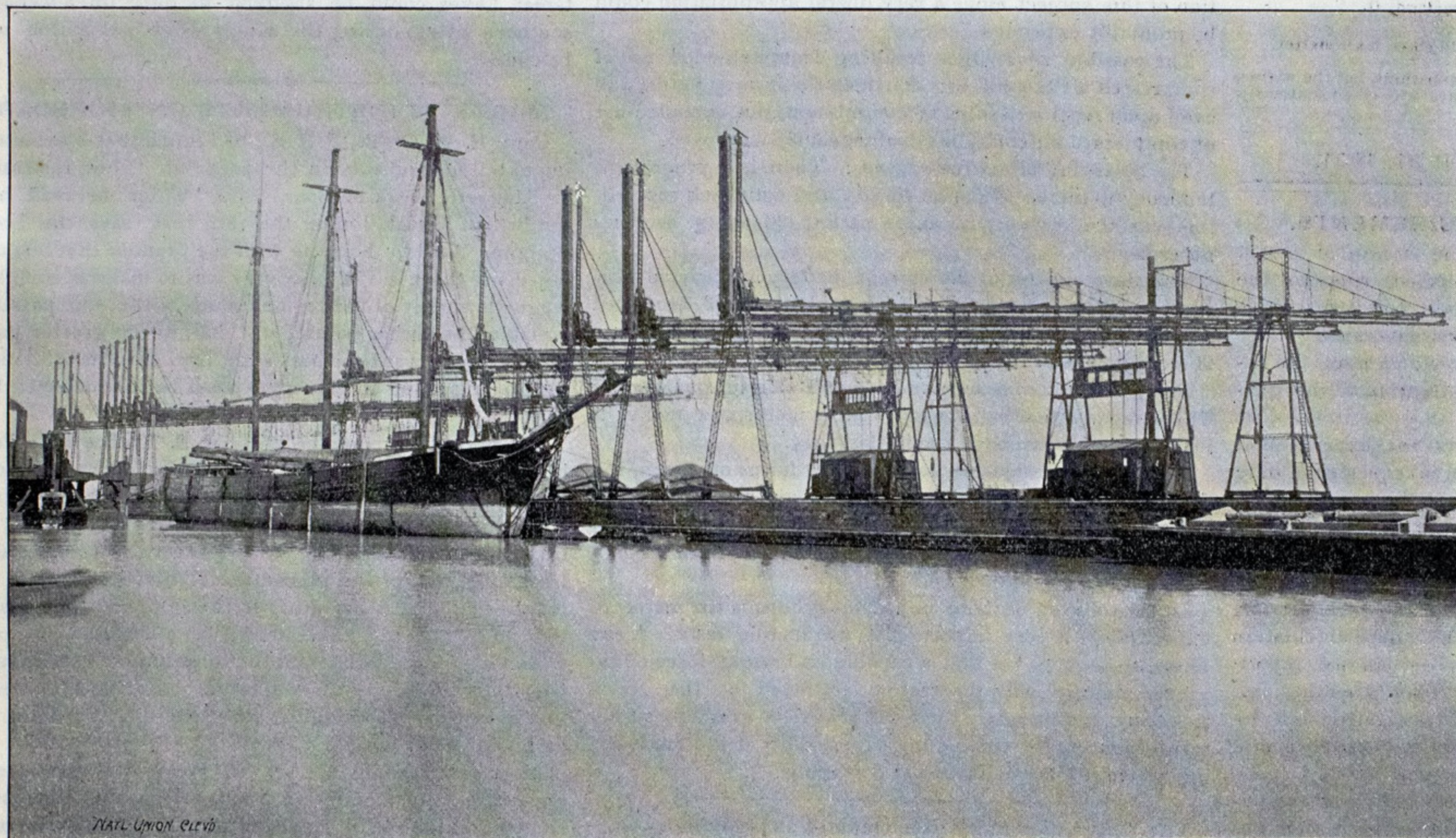
The Pacific ocean, with its moderate and mostly steady and reliable winds, will be the future most profitable home of the sailing ship. The prophetic saying of the Hon. William H. Seward in the year 1867, when he made the purchase of Alaska, that "the Pacific ocean at no distant day would become the commercial battle ground of

the world," is fast being accomplished. The United States is at this moment the power who has the greatest interests to watch over and protect. The peaceable possession of the Hawaiian Islands and the cession of the Philippines and outlying dependencies to our country by their former possessor, Spain, places our country in predominant control of the commerce of the North Pacific. Of this there can be no dispute. But, although the United States, through her Pacific coast seaports, are in a position to supply the wants of all the countries bordering on the Pacific Ocean, as well as all likely customers elsewhere, they are not yet in a position to deliver the goods, for lack of the necessary shipping. A perusal of the shipping columns of the Commercial News will disclose the fact that the carrying business in the North Pacific is not in the hands of the ships of the countries directly interested. For instance, a German, Austrian or British steamship may be carrying flour to Siberia, when in all fairness an American or Russian vessel should be doing the business.

It is perfectly natural that a British or American vessel should be doing the carrying for British ports, but we see the ships of all nations employed at this work—even to British ports that are close neighbors to us.

What interest, it may be asked, can an Austrian, an Italian, German, French, or any other foreign ship have beyond

(CONTINUED ON PAGE 12).



THE NEW METHOD OF HANDLING COAL AND ORE BY THE BROWN HOISTING MACHINES.

London. * * * The city of London as distinct from the port of London seems fast losing its ocean trade, which on account of the great length of the modern steamship, are unable to turn in the upper reaches of the river, and they have built docks to accommodate these large vessels at Tilbury—which is about twenty-one miles below London bridge. The Royal Albert dock, adjoining the Victoria dock, and about the same size (90 acres,) is something new also since I was last in London, and there have been extensive improvements over on the Surrey side in the shape of new and enlarged docks. The great St. Thomas Hospital, exactly opposite the houses of Parliament, has been built since 1863 also.

OUTPORTS OF U. K.

Forty years have produced some changes in all the great shipping ports of the British Islands. The port of Middlesbrough on the east and Barrow-on-Furness on the north-western coast of England have risen from small coasting ports to great shipbuilding and manufacturing centers. The great coal ports of the Tyne, Wear and Huber have long ago ceased to derive their sole support from the export of coal, but have developed into great iron and steel shipbuilding and manufacturing cities. The proportion of sailing ships at these ports is greater than at Liverpool or London, but here, as elsewhere, sailing ships are losing their importance.

The present port of Glasgow is a standing and everlasting monument to the ability, enterprise, patience and perseverance of its citizens in making such a fine port out of such a place, so little calculated by nature for the purpose. Glasgow is the home for a large fleet of sailing ships, but steamers are slowly outnumbering them. This port has the same characteristic as the port of Bath, Me., inasmuch as many ships built and hailing from the port, after leaving it for the first time, may never return until they have to be rebuilt or need new boilers or engines.

Belfast, in Ireland, is now one of the most progressive ports in that country. It is famous for its great shipbuilding yards, which have turned out some of the largest and finest vessels, both sail and steam, in the world. As a commercial port its rank is not high, nor indeed is any port in Ireland. The greatest number of ocean-going ships are to be seen at Queenstown, which, however, is only a port of call from which ships are ordered to deliver their cargoes elsewhere.

FRENCH PORTS.

The ports of Havre and Dunkirk, in France, are not crowded with sailing ships as they used to be, but, as elsewhere, the individual ship is much larger. The aggregate annual tonnage of these ports show some increase, and here, as in the British ports, the steamships, both for domestic and foreign trade, are fast gaining ground. Within the last few



ESTABLISHED 1878.

Published Every Thursday by

THE MARINE RECORD PUBLISHING CO.,
Incorporated.

C. E. RUSKIN, - - - - - Manager.
CAPT. JOHN SWAINSON, - - - - - Editor.

CLEVELAND, - - - - - CHICAGO,
Western Reserve Building. - - - - - Royal Insurance Building.

SUBSCRIPTION.

One Copy, one year, postage paid, - - - \$2.00
One Copy, one year, to foreign countries, - - - \$3.00

Invariably in advance.

ADVERTISING.

Rates given on application.

All communications should be addressed to the Cleveland office,
THE MARINE RECORD PUBLISHING CO.,
Western Reserve Building, Cleveland, O.

Entered at Cleveland Postoffice as second-class mail matter.

No attention is paid to anonymous communications, but the wishes
of contributors as to the use of their names will be scrupulously
regarded.

CLEVELAND, O., OCTOBER 31, 1901.

NAVAL ENGINEERING REQUIREMENTS.

The annual report of the Chief of the Bureau of Steam Engineering, which has just been published, contains the usual amount of valuable technical data and suggestions which the country has been pleased to receive so regularly at the hands of Admiral Melville, U. S. N. Among the engineering requirements to which the attention of the government is called are the following:

As stated in several annual reports the experimental work for which an urgent appropriation is requested is only for such purposes as will directly benefit the naval service and the engineering profession at large. Incidentally it will be of incalculable benefit for the testing of many patent appliances which inventors offer for a government test, and which may prove useful or economical for the naval service.

Some of the engineering questions which need elucidation by experiment have been given in my last annual report. The liquid fuel tests are progressing. There are other important questions which should be investigated, but by reason of the lack of a properly equipped experimental laboratory, such research must be postponed.

This Bureau receives many letters every year from responsible parties seeking professional information which the Bureau should supply. The number of such requests would be greatly increased if the Bureau had facilities and opportunities for conducting necessary and instructive tests.

The leading marine engine builders, consulting engineers and talented professors at various technological schools have repeatedly urged me to impress upon the department and the Congress the necessity for such a laboratory. It can hardly be expected that individual shipbuilders and the scientific colleges should be subjected to the expense of conducting tests that are primarily for the benefit of the naval service. It may often be the case that there are military reasons why the Navy Department should not receive this information through others. Every leading university considers it imperative to do original work and research, and the government should certainly carry on such tests if the accruing results are likely to lead to increased naval efficiency.

The following are some of the problems that the Navy should at least assist in solving:

The best means of utilizing liquid for naval and maritime uses: A new impetus has been given the consideration of this subject by reason of the discovery of the Texas and California crude-oil fields.

The value of the steam turbine for naval purposes: The British Admiralty regards this subject as of vital importance, and the success achieved with the two torpedo boat destroyers installed with this appliance warrants increased attention being given to the matter.

Form and size of propellers; their location with reference to the keel and sternpost; the character and area of the blade. The experience of the various torpedo-boat builders during the past five years conclusively shows the necessity of extended investigation of this subject. The tests made by this Bureau twenty-five years ago were exceedingly valuable, and urgent requests have been made that more experiments of this nature be conducted.

The value of electricity as a prime mover for naval purposes: In the United States Navy the use of electricity is more extended than in that of any other service. Its endurance for naval purposes has been seriously questioned by others. Systematic tests and experiments would undoubtedly prove exceedingly beneficial.

The corrosion of boiler and condenser tubes: The rapid deterioration of both boiler and condenser tubes seriously decreases the engineering efficiency of the modern warship. The Bureau has made some important tests in connection with this matter, but the necessity for further investigation and experiment is exceedingly apparent.

The best form and type of water-tube boilers for naval purposes: There are military and tactical reasons why our navy should soon settle upon an approved type of boiler. There are so many factors that will interfere with boiler efficiency that extended experiments are necessary to secure valuable information upon the subject. In the investigation of this subject alone a very liberal appropriation could be profitably expended.

The possible advantages resulting from extended use of compressed air as a motor: Particularly at navy yards, and even upon repairs to ships in commission, the extended use of compressed air could be advantageously employed.

The balancing of marine engines: There is a progressive tendency to increased piston speeds, and with each succeeding year the necessity for more perfect balancing becomes necessary.

The development of the storage battery for marine purposes: The discovery of a storage battery of decreased weight but increased endurance will greatly advance the use of electric motors in the service.

The perfection of a more reliable and efficient gas engine: The danger attending the use of this motor now makes it inadvisable for extended use in the Navy.

Extended investigation as to the best forms of steam, hydraulic and pneumatic joints: By reason of the development of the water-tube boiler the tendency is toward increased pressure. Considerable trouble has been experienced in making joints.

In the solution of these important problems the matter of expert talent is very important in conducting tests. It can never be doubted but that a capable and strong force of engineer officers will always be stationed at the Naval Academy, and therefore there will always be available highly trained officers for conducting experiments if the engineering laboratory is established at Annapolis.

The British Admiralty have obtained expressions of opinion from leading builders of torpedo boat destroyers with regard to certain contemplated changes to economize weight and facilitate repairs on vessels of that type. Several destroyers are soon to be built, and it is intended not only to give them increased size and seaworthiness, but also to enlarge their radius of action by providing for larger coal capacity even at the expense of speed. In something like half of the 100 of these boats, which have been added to the British fleet within the last three years, the speed rate was 30 knots or over, reaching 32 in the Arab, 33 in the Express, 35 8-10 in the ill-fated Cobra and 36 58-100 in the Viper. In the boats now in contemplation the maximum rate will be only 27 knots. There is this difference, however: The destroyers now afloat are capable of maintaining their maximum speed for only three hours with half a load of coal aboard, while the new ones are expected to maintain 27 knots for four hours with a full supply of coal. To obtain these advantages weights must be rigorously economized, and prospective contractors have been asked whether the two sets of engines could not be built closely back to back, instead of separately, so that one central framing or support for the engines might suffice. The court of inquiry to investigate the wrecking of the Cobra, above mentioned, on Sept. 18, whereby upwards of 70 lives were lost, has reported that the vessel simply collapsed because she was structurally weak, that she did not touch ground and that no errors were made in her navigation. The purchase of the Cobra for the government is condemned by the court.

NAVAL RESERVES.

Naval officers and others interested in naval affairs have for years been directing the attention of Congress, through the Secretary of the Navy, to the fact that in time of war not one-half of the vessels of the navy could be manned on account of the lack of trained sailors. But no action has ever been taken in the matter, generally on account of the lack of influence. This defect, however, is said to have been strongly felt by President Roosevelt when he was Assistant Secretary of the Navy, and now that he is President it is said that he will devote part of his annual report to Congress to recommending the organization of a national naval reserve. Under the pressure thus brought to bear friends of the navy are confident that Congress will pass a bill creating a naval militia of national scope.

Such an organization would include all State naval reserves now in existence, or rather all members fit for service, and yachtsmen and sailors. The number joining this reserve would at first be about 5,000, but could be increased later on. The British navy has for a long period been reinforced by such an auxiliary, and there many of the retired naval officers are placed in the reserve. Each militiaman would be required to drill on board a war-ship for a time not less than one week nor more than a month each year. The training time could easily be arranged for the convenience of the reserve. For instance, sailors on the Great Lakes could be assigned to duty on a warship in southern waters during the winter when navigation would be closed.

MAGNETIC INSTRUMENTS ON SHIPBOARD.

Capt. E. W. Creak, F. R. S., had much that was interesting to tell his audience in the paper on "New Instruments for Magnetic Work on Board Ship," which he read before the British Association on the 18th inst, says the London Shipping World. Starting with the premise that one of the objects of those in the Discovery was to make as complete a magnetic survey of the regions south of the 40th parallel as possible, the author pointed out that, as the greater portion of that region was open sea, with few chances of landing, the major portion of the survey must be conducted on board ship.

The previous experience in H. M. S. Erebus and Terror, both wooden ships, showed the serious effects of iron in those ships in disturbing the magnetic instruments on board. In the case of the Discovery, with engines, boilers and other iron bodies on board, magnetic observations would be almost impossible but for the precaution of first choosing a place for the magnetic observatory in the ship, and then insuring that no iron of any kind should be allowed to be placed within a 30-foot radius from that position. The ship having been thus prepared, the important question of a reliable instrument for observing the magnetic dip and total force on board of her arose.

After referring to Mr. R. W. Fox's dip and intensity apparatus, Capt. Creak said that previous experience having shown that the use of needles with cylindrical axles resting on agate planes, either for dip or force, was impossible, the trials he had made with various forms of needles and jewels resulted in his adopting a form of both. By this arrangement the needles could be retained in place even when the gimbal table upon which the instrument was placed was subject to irregular motions due to those of the ship. With the circle thus fitted the absolute dip and total force could be observed in accordance with the usual methods described in the Admiralty manual of scientific inquiry. As there must be a slight oscillation of the needles at times when the ship was unsteady in a seaway, he had arranged that the ends of the needles should come so near the graduated arc that the readings might be made directly, without the use of verniers.

As in the land instrument, the reading of the circle could be accurately made at night or during the Antarctic winter by placing a candle at the back of the circle, when the light would be reflected by the ivory face of the microscopes to the graduated arc. The zero of the graduation on the base plate was so placed that whenever the magnetic direction of the ship's head was known to the compass adjacent and the plane of the circle, it could be immediately placed on the magnetic meridian without the trouble of finding the meridian by the usual method.

The excursion steamer Gazelle has been sold by the U. S. marshal at Buffalo for \$2,600. The purchaser is Daniel Mahoney, head of the Commercial Oil Co.

THE INDUSTRIAL IMPROVEMENTS AT SAULT STE. MARIE.

In a paper published in the latest report of the Ontario Bureau of Mines, Mr. F. N. Speller gives the following description of the plant which the Lake Superior Power Co. is erecting at Sault Ste. Marie:

"The coke to be used at the Sault must be brought from either the Connelville or Punxsutawney district. This is the most important item in the cost sheet of the locality under consideration. It means an approximate haul of 210 miles by rail from Connelville to Lorain or Cleveland, and a water haul to the Sault equivalent to 80 miles of rail haul. As it will require 1.70 tons of coke to smelt an equal quantity of ore and produce one ton of pig iron, applying Mr. Moxham's freight we find that it will cost about \$1.97 to bring this fuel within easy reach of good ore and limestone on the north shore of Lake Superior or at the Sault; so that it appears quite evident that the cost of assembling the necessary raw material—coke, limestone and iron ore—in the neighborhood of Sault Ste. Marie should be much less than at Pittsburg. At present the bessemer steel works and rail mills are being installed with three 8-ft. cupolas for melting the pig iron for conversion. The pig iron will be provided by the Midland furnaces, until the large pair of blast furnaces, now being designed are completed, when the direct metal process will be adopted. The bessemer plant will consist of two acid-lined converters of 5 tons capacity each. The metal, after being blown, is handled as in the best modern practice, by pouring into moulds on buggies, the ingots being stripped after standing a few minutes. The stripping is done by means of an overhead stripping crane, designed by the Wellman-Seaver Engineering Co., of Cleveland. This crane is also provided with an auxiliary trolley which is used to change the ladles on the ladle crane. The ingots are then conveyed to the pit furnaces (soaking pits) consisting of two four hole furnaces. The ingots are drawn and charged in these furnaces by an overhead electric drawing and charging crane, designed by above-named company, which also delivers the ingots on the blooming mill tables. They are then passed through the 32-inch blooming mill, driven by a pair of 28x48 reversing engines, built by the Southwark Foundry & Machine Co., of Philadelphia. The blooms are then sheared to the proper length in proportion to the section of rail into which they are to be rolled and next are conveyed to four Siemens regenerative heating furnaces. The overhead drawing and charging crane is used in connection with these reheating furnaces for charging and drawing the blooms. This crane also delivers the bloom on rollers which run to a 23-inch rail mill driven by a 40x48 inch Porter-Allen engine, built by the Southwark Foundry & Machine Co. There are in this mill three stands of rolls; first and second roughing and finishing roll. The material is handled and manipulated at the rolls by electrically driven transfer tables, designed by the Wellman-Seaver Engineering Co. This train is covered by an overhead electric traveling crane, which is used for handling rolls and spindles when changing from one section of rail to another. After leaving the rolls the rails are run to the hot saws, where they are sawn to the required lengths. They are then passed through a cambering machine and conveyed to the hot beds, where they are permitted to cool sufficiently to be finished in the cold finishing department. Here the rails are straightened, inspected and drilled, then handled by pneumatic overhead hoists and loaded on cars under cover of shipment. The cold finishing department being all under roof, the product is carefully protected until loaded on the cars. The plant is laid out with a view to handling rails in 30 or 60-ft. lengths up to 85 lbs. per yard, and structural materials, such as angles, channels, beams, etc."

As so long advocated in the columns of the RECORD we now learn that Governors of States, including Governor Nash, of Ohio, has received from John D. Long, Secretary of the Navy, a letter asking for information as to the strength of the Naval Reserves of the Ohio National Guard. Secretary Long, for some time had in view the advisability of organizing a national naval reserve under the direct control of the Federal Government, and he will attempt to secure the enactment of a law to such effect. It is the purpose to make eligible to the National Naval Reserve only men who have seen service in the Spanish-American war, who have been connected with a naval reserve for at least three years, or who have had much service on the sea. They will receive training for several weeks each year, if the proposed plans are carried out.

THE WEATHER FOR NOVEMBER.

Astronomical data for November, 1901, furnished the MARINE RECORD by the Washburn observatory:

An annular eclipse of the sun occurs on Nov. 10th in the midst of the night for this part of the world. The path of central eclipse will begin at Sicily and extend eastward, across Arabia, the northern part of the Indian ocean, and terminate in the Philippines.

Mercury becomes a morning star Nov. 4th and will reach greatest elongation west Nov. 20th; but the planet will not be favorably situated for observation. Venus continues to appear higher each evening in the southwestern sky as the bright evening star and is increasing rapidly in brilliancy. The ruddy Mars also may still be seen after sunset lost in the southwestern sky. Higher and farther east the planet Jupiter shines, next to Venus, the brightest star in the evening sky, and is followed close by Saturn in the east and little north. The pair of planets are set by the middle or early evening.

The times of sunrise and sunset at Milwaukee for the month are as follows:

	SUNRISE.	SUNSET.
November 1.....	6:26.....	4:44
November 11.....	6:39.....	4:32
November 21.....	6:51.....	4:23
November 30.....	7:02.....	4:18

The times of the moon's phases are:

Third quarter.....	November 3.....	1:24 a. m.
New Moon.....	November 11.....	2:34 a. m.
First quarter.....	November 19.....	2:23 a. m.
Full Moon.....	November 25.....	7:18 p. m.

The principal fixed stars visible during month in the evening hours are: To the west: Vega and Altair. To the east: Aldebaran the Pleiades and Capella.

ANOTHER ATLANTIC RECORD.

The steamer Kaiser Wilhelm der Grosse, which sailed from New York October 22, has again broken her eastward record, having arrived at Plymouth at 3:08 Tuesday morning after a passage of five days ten hours from Sandy Hook light-ship. Captain Hogemann's cable dispatch to the agents of the line stated that the Kaiser had made an hourly average of 22.88 knots and daily runs of 503, 553, 534, 526, 539 and 338 miles. Moderate sea and weather prevailed during the voyage.

SHOAL REPORTED.

The reported striking of a ship on a hitherto unknown and uncharted shoal in the St. Lawrence river, between McNair Island and the Canadian shore, caused the U. S. engineers to immediately start out a survey party to determine definitely as to its existence and location.

This survey has now been completed, and it is found that the shoal is a rock ledge about 100 feet long and 85 feet wide between 18-foot curves, with a least depth on it of about 13½ feet at low water. It is in the middle of the channel between McNair Island and the Canadian shore, right in the track ordinarily used by deep draft vessels navigating this river.

Major Symons, Corps of Engineers, U. S. A., who has had the matter in charge, will recommend the removal of the shoal at the earliest possible date, and in the meantime he suggested great caution on the part of deeply loaded vessels navigating this part of the river.

MARINE PATENTS.

- 684,859. Coal-handling Device. Staunton B. Peck, Chicago, Ill., assignor to the Link Belt Machinery Co., Chicago, Ill., a corporation of Illinois.
- 684,868. Oar. James A. Robison, Detroit, Mich.
- 684,871. Apparatus for regulating and controlling marine engines. Alexander M. Rust, Auckland, New Zealand.
- 684,878. Folding life-raft. Eduard A. Sperba, Dresden, Germany.
- 685,028. Apparatus for submarine operations. Charles H. Brown, Port Huron, Mich., assignor of one-half to Stephen G. Martin and Abraham S. Martin, Port Huron, Mich.
- 685,047. Anchor. Fletcher Joiner, Schenectady, N. Y.
- 685,089. Propeller. John Barnett, Los Angeles, Cal.
- 685,158. Life-preserver. Icilius W. Maccolini, Inwood, N. Y.
- 685,165. Visual indicator for submergible boats. Charles A. Morris, Glenridge, N. J.
- 685,165. Apparatus for putting torpedoes on vessels. Charles A. Morris, Glenridge, N. J.
- 685,237. Hatch-fastener. Clarence M. Holley, Ann Arbor, Mich.

TREATMENT ON AMERICAN SHIPS.

No maritime nation affords better wages, better food, or better accommodations to her seamen, than does America. The minimum scale of provisions on American merchant vessels fixed by law is far and away in advance of the similar scale in existence, by agreement, over here. The order of the day on American ships is plenty, but no waste. In ships bound round Cape Horn, for example, allowance is unknown. Water is always available for the thirsty man, and food for his hungry shipmate. No one who has not made a few voyages in an American sailing ship, commanded by an American, can have the faintest idea of the variety in the diet and the daintiness of the dishes served out even to the men before the mast. There is always a hot savory mess for breakfast, and various kinds of soft bread for supper; while a barrel of appetizing white biscuits is never allowed to be empty inside the seamen's dwelling place.

A recapitulation of the items of the legal minimum food scale for American seamen would make the mouth of British merchant Jack water, on a deep-water sailer. Food on British sailing ships is good enough—only the ignorant term it "offal"—but it is lacking in quantity and in variety. Moreover, the American sailor has his food from a clean galley, in a clean tin vessel—not in a wooden so-called "kid," somewhat after the fashion of a miniature hog-trough. By the Acts of 1895 and 1897, American vessels are required to provide 72 cubic feet space for the quarters of each seaman; and in the case of sailing ships built subsequent to June 30, 1898, the space has to be 100 feet. Congress has bettered the food scale and the accommodation of American merchant seamen considerably during the past four years, but the very large majority of American shipowners have not murmured with respect to the extra expense thereby entailed. The American ship owner long since discarded the dismal lower forecastle and the uncomfortable topgallant forecastle for the roomy deckhouse, with windows on each side.

With American-born boys in training, a food scale and accommodation for seamen second to none, and a rate of wages somewhat in excess of other nations, America's merchant marine, in its expanded form, will never lack officers or men. Moreover, in American ships it is not a case of ease and starvation or growl you may, but go you must, for the men are well cared for and naturally give willing service. Hence the higher cost of an American crew in an American ship is counterbalanced by the extra work got out of the men ungrudgingly.—London Syren and Shipping

LAKE CHAMPLAIN'S OLD TREASURE SHIP.

Several problems of considerable delicacy have been presented by the recovery, a few years ago, of 10,000 sovereigns from an English sloop that had been lying since 1777 at the bottom of East Bay, Lake Champlain, says the New York Times. The treasure was sent from Quebec for use in paying Burgoyne's troops, and the vessel was scuttled by its captain, one Johnson, when he was attacked by a superior force of Yankee soldiers in retreat after the reverse at Hubbardton.

There was afterward some suspicion that Capt. Johnson removed and appropriated the treasure before he sank the sloop, but his honesty is at last vindicated. With the course of the years the sloop was covered with silt brought down by a neighboring river, but this spring unusually high water washed much of the deposit away and left a portion of the wreck exposed. Mr. George B. West, a civil engineer, turned the course of the stream, did a little work with pick and shovel, and then with a charge of dynamite broke open the old hull. In the cabin he found a few muskets and an iron chest, and in the latter were the sovereigns quite unharmed by the long submersion. They are now in a bank at Fairhaven, claimed as treasure trove by the state of Vermont. Prof. S. M. MacVane, of Harvard, has made the somewhat painful suggestion that perhaps the British government can establish an equity, if not a right, in the gold, and that, as its origin is known, Vermont may be moved to make some sort of restitution. Naturally enough, this idea has not been received with enthusiasm in Vermont. Why, indeed, should it be? The title to property passes very easily in time of war, and if the Americans who forced the sinking of the sloop had been able to fish up its precious contents, they certainly would have taken possession of them without any compunctions. New York state has quite as good a claim to the gold as Great Britain has, for it was not until years after 1777 that Vermont's ownership of the region where the treasure lay was admitted by this state, and during that period we had a sort of proprietary interest in the gold.



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WHY TRUSCOTT
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GRADUAL DISAPPEARANCE OF THE SAILING SHIP.

(CONTINUED FROM PAGE 9).

that of a common carrier anywhere in the commercial business of this western coast of the United States except for the profit there is in it, which, of course, goes out of the country. The same may be said of British and American ships; and, admitted that they are not operating their vessels solely on sentimental or philanthropic lines—but "for all there is in it"—but, there is this difference, that all the money earned is again put into circulation in one or the other of the countries from whence it has come, and in this way the vessel participates in the upbuilding of the commerce of the countries from whence it draws its existence.

While the wind blows, there will always be sailing vessels, and there are trade routes on the Pacific Ocean in which the fine vessels built and building on the Pacific coast will always find business. But shipowners and builders with an eye to the future must increase the size of their vessels and study every scheme and device for the economical management and working of them. They present a tolerable bold front to the steamer of 8 to 10 knots using coal as fuel—on long voyages—but they will be unable to compete with any steamers on long or short voyages when they are fitted for burning oil.

UNITED STATES NAVAL ACADEMY, ANNAPOLIS, MD.

FROM THE ANNUAL REPORT OF ADMIRAL MELVILLE.

The Bureau has included in its estimates the sum of \$250,000 for the purpose of erecting a building to be used for an experiment station and testing laboratory at the Naval Academy, in the department of marine engineering and naval construction; this building to be two stories high, about 110 by 150 feet, and to conform in design and construction with the new buildings now being erected at the Naval Academy.

The sum of \$150,000 has also been estimated for to equip this building with all the necessary appliances and apparatus as an experiment station and testing laboratory.

An establishment of this character will be of the greatest benefit to the service at large and afford means for securing much valuable information that can not be obtained in any other way. Besides this it will be of the highest value in training the cadets and instructing them in the method of conducting physical and mechanical tests and obtaining trustworthy and reliable results. It will also afford the means for advanced and original research in many serious engineering problems still undecided, serving the same useful purpose in steam engineering matters and questions that the experimental tank does which was lately erected at great cost in the Washington Navy Yard, and is now in practical use, in the determination of best forms of ships' hulls.

The expense of an experiment station is almost entirely in its first cost, as its maintenance afterwards would be trifling, because nearly all work in it would be performed by officers or others already in the service of the Government.

As it is certain that the benefits to be derived from such building and equipment will be out of all proportion to its cost, the Bureau can not too strongly urge its construction.

WORK DONE IN INSPECTION OF MATERIAL.

The labor troubles of the last quarter of the fiscal year have caused a falling off in the total of material inspected as compared with last year's work.

The number of firms filling Government orders shows an increase, and in consequence the territory to be covered by the inspectors has become enlarged, so that an increase in the number of headquarters, each with a naval inspector in charge, has become necessary. By increasing the number of inspectors, and thereby decreasing the area of territory for which any one inspector is responsible, traveling expenses are decreased and greater efficiency in the work of inspection must ensue.

The work of inspection is an engineering work, requiring ability and experience, and it should be the aim of the Navy to keep this inspection work in its own hands, intrusted to its own commissioned line officers, who are most directly interested in getting the very best in material for the guns, machinery, and hulls of the ships they may be called upon to fight. Our young line officers should be given the opportunity, under the present naval inspectors, to get the experience necessary to enable them to become efficient inspectors in charge. They have already the theoretical knowledge required, and by their general education are fitted readily to acquire the necessary experience. Particularly is this true in the case of those officers whose bent is toward marine engineering. Inspection for this bureau will be most efficient, when the inspector combines a knowledge of the physical and chemical properties of the metal he inspects, with an intimate acquaintance with the design and construction of the machinery into which the metal is to be worked.

STATEMENT OF THE VISIBLE SUPPLY OF GRAIN.

As compiled by George F. Stone, Secretary Chicago Board of Trade, October 26, 1901.

CITIES WHERE STORED.	WHEAT. Bushels.	CORN. Bushels.	OATS. Bushels.	RYE. Bushels.	BARLEY. Bushels.
Buffalo.....	2,476,000	1,327,000	470,000	13,000	681,000
Chicago.....	5,066,000	7,134,000	1,741,000	580,000	21,000
Detroit.....	639,000	342,000	40,000	136,000	47,000
Duluth.....	4,621,000	482,000	456,000	252,000	902,000
Fort William, Ont.....	1,485,000				
Milwaukee.....	137,000	24,000	341,000	40,000	145,000
Port Arthur, Ont.....	225,000				
Toledo.....	556,000	578,000	1,051,000	366,000	9,000
Toronto.....	36,000				55,000
On Canals.....	523,000	224,000	610,000		345,000
On Lakes.....	1,447,000	766,000	558,000	110,000	287,000
On Miss. River.....					
Grand Total.....	40,634,000	13,636,000	8,247,000	1,953,000	2,820,000
Corresponding Date, 1900.....	59,773,000	8,144,000	12,536,000	1,050,000	3,067,000
Increase for week.....	1,241,000	187,000	203,000	89,000	234,000
Decrease " ".....					

While the stock of grain at lake ports only is here given, the total shows the figures for the entire country except the Pacific Slope.

A METHOD of marine propulsion by pneumatic ejection was tried recently at the Carpenter Co.'s Baths at Stratford, says a London newspaper. The inventor has made two model boats, five feet in length—one a shallow draft river boat, and the other on the lines of an ocean-going steamer. The steam is generated in a boiler of special pattern, and by means of a patent steam jet induction apparatus atmospheric air is propelled along tubes running to the stern of the vessel. The force of the air against the water propels the boat. Reversing is effected by diverting the steam into tubes running to the bow, and steering by stopping the ejection of steam on one side.

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IMPROVED FLOATING CRANE.

In the shops of the Brown Hoisting Machinery Co., the workmen have been putting the finishing touches to an engineering novelty in the shape of a floating crane. The crane is being built for the government, and will be delivered within the next two months at the Brooklyn navy yard, where it will be used for handling armor plate and heavy guns.

Floating cranes must be operated from pontoons. Hitherto when the crane was in use, the list of the pontoon has been a great difficulty to its successful operation. The invention which Mr. Brown has applied to the crane, now being built under his directions, is for the purpose of doing away with this listing or tilting of the pontoons.

A great counterweight of 300 tons is the means employed to keep the deck of the pontoon level while the crane swings its heavy load into place. The counterweight runs on two rails and works automatically, resting in the center of the pontoon until the crane begins to swing and then following its movements as the lift threatens the equilibrium of the pontoon. A steam engine that operates the counterweight by means of the usual drum is set at work at the least movement of the crane as soon as the lift begins.

The crane now under construction by the Brown Hoisting Machinery Co. has the power to lift 110 tons and swing that amount 45 feet from the pontoon in seven minutes. The fastest lift of the same dimensions now in Brooklyn navy yard requires thirty minutes to perform the same feat. The pontoons for the new crane are being constructed by Cramp's shipyard in Philadelphia, but all the machinery is being built in Cleveland.

EASTERN FREIGHTS.

Messrs. Funch, Edye & Co., New York, report the condition of the Eastern freight market as follows:

Although the fixtures of steam tonnage during the current week are larger in volume than the preceding week, the offerings of steam are still far in excess of the requirements of the market, and shippers still have it practically their own way in naming rates at which business can be transacted. The activity in cotton is entirely limited to the Atlantic Coast at rates which show no improvement whatsoever, whilst from the Gulf business appears to be almost at a standstill, there being actually no demand for tonnage. On the other hand, steamers are offering to come up from the River Plate to load at one of the Gulf ports at the low rate of 11s. on the net charter, but without finding takers. One of the features of this week's business is the report of several steamers closed for case oil to the Far East at a considerable decline in the rate, and further transactions of this description can probably be repeated at the figures recently accepted.

In regard to sail tonnage, we can only state, that the market remains neglected, with the rates for long voyages still influenced by the low figures accepted on the part of steam tonnage.

Grain to London, 2 cents; Liverpool, 3 cents; Glasgow or Bristol, 4 cents.

THERE is talk at Chicago of a further advance in lake seamen's wages on November 1, perhaps to \$2.75 per day, with a clause stating that \$3 will be asked after the 15th of that month. Vesselmen say that if such transpires all small sailing craft will be compelled to lay up.

NOTICE TO MARINERS.

DOMINION OF CANADA—ONTARIO.

SOUTHEAST SHOAL—LIGHTSHIP PLACED.—Referring to notice to mariners No. 48 of 1901 and to part I of No. 59 of 1901, this Department is advised by the Lake Carriers' Association that they have replaced the lightship burned off Southeast shoal, Pelee Passage, Lake Erie, by the steamer Kewaunee adapted for temporary use as a light vessel. The vessel is located on the same spot as the former lightship, one mile southeastwardly from the southern extremity of the shoal. No particulars respecting her have been received, but the chief engineer of this department learned from verbal reports that a fixed white light was shown from a cluster of three fifth order lens lanterns hoisted around a high mast; and that the fog alarm consisted of a modoc or wild-cat steam whistle, the valve of which is operated by hand.

SOUTHEAST SHOAL—GAS BUOY TO BE REMOVED.—It is proposed, on or about the 15th instant, without further notice, to remove the gas buoy maintained off the south extremity of Southeast shoal, somewhat inside the new lightship.

PELEE PASSAGE LIGHTSHIP—PROGRESS OF WORK.—The foundation of the new lighthouse on the Middle Ground, in Pelee Passage, is now completed, and rises to a height of 20 feet above the level of the lake. The steel work and concrete pier is temporarily surmounted by four rough wooden sheds, and the lens lanterns from which lights are shown are placed upon the roofs of two of these sheds, at a height of 30 feet above the lake. This information is from a report by the chief engineer of this department.

BAR POINT CUT—GAS BUOY TO BE ESTABLISHED.—It is the intention of this department, on or about the 15th instant, to establish a gas buoy on the east or starboard side of the south end of the dredged channel off Bar Point, at the mouth of Detroit river, a short distance southwardly from the most southerly of the red spar buoys now marking that dredged channel. The buoy will be a cylindrical buoy painted red, surmounted by a red lantern from which a fixed white light will be shown at an elevation of 9 feet above the water. Mariners are requested to give it a good berth, as this department has no facilities for replacing it promptly if wrecked.

DETROIT RIVER—LIMEKILN CROSSING—WATER SIGNALS.—The Hydrographer of the United States Navy gives notice that the water signals of the Pittsburg and Smith coal docks, maintained by the Lake Carriers' Association, will show the depth of water at the Limekiln Crossing up to 18 feet 6 inches. Masters are cautioned not to attempt to pass the crossing at any greater depth than is shown by the signals.

UNITED STATES OF AMERICA—LAKE ERIE.

ASHTABULA HARBOR—CRIB TO WESTWARD OF ENTRANCE.—Information has been received from the Branch Hydrographic Office, Cleveland, that on 19th August, 1901, a 50-foot crib was sunk to the westward of the entrance to the harbor, 1,800 feet to the northward and 100 feet to the westward of front light. Vessels entering the harbor should keep at least 2,000 feet to the northward of front light until picking up the ranges, and keep ranges open from there on. A fixed white light will be exhibited above the crib at night and a white flag by day.

CONNEAUT HARBOR—BREAKWATER ADVANCED IN CONSTRUCTION.—Information has been received from the Branch Hydrographic Office, Cleveland, 26th August, 1901, that 743 feet have been added to the Conneaut breakwater to the northward and westward of the west pier, making the total length 1,025 feet. A small white light is maintained on the end of the breakwater.

ST. LAWRENCE RIVER.

CAPE VINCENT BREAKWATER—BEACON LIGHTS ESTABLISHED.—On or about 31st August, 1901, a fixed red lens lantern light, 25½ feet above the mean level of Lake Ontario, and illuminating the entire horizon, will be established on each of the two structures now being erected on the ends of the breakwater off Cape Vincent, southern side of the head of St. Lawrence river. Each of the structures stands about 20 feet from its end of the breakwater, and is a small square white wooden house with pyramidal roof,

above which rises two uprights. This notice affects Admiralty charts Nos. 797 and 1152; and U. S. H. O. publication No. 108, 1896, page 192.

F. GOURDEAU,

Deputy Minister of Marine and Fisheries.

Department of Marine and Fisheries,

Ottawa, Canada, 11th October, 1901.

All bearings, unless otherwise noted, are magnetic and are given from seaward, miles are nautical miles, heights are above high water, and all depths are at mean low water.

Pilots, masters or others interested are earnestly requested to send information of dangers, changes in aids to navigation, notices of new shoals or channels, errors in publications, or any other facts affecting the navigation of Canadian waters to the Chief Engineer, Department of Marine and Fisheries, Ottawa, Canada.

SHIPPING AND MARINE JUDICIAL DECISIONS.

(COLLABORATED SPECIALLY FOR THE MARINE RECORD.)

Master of Ship.—The master of a ship has such a special property in the vessel and cargo that he may bring action in his own name, either at law or in equity, against one who wrongfully interferes with his possession of either. *Tuells vs. Torros*, 39 S. E. Rep. (Ga.) 455.

Action for Services—Complaint.—Where an ambiguity in the complaint could easily have been remedied by amendment, the judgment should not be reversed because a special demurrer on that ground was improperly overruled. *Olsen vs. Birch et al.*, 65 Pac. Rep. (Cal.) 1032.

Admiralty—Bond for Release of Vessel—Decree Against Surety.—Where bond has been given by the claimant of a libeled vessel, under Rev. St. § 941, a final decree, awarding damages in the suit, may be entered against both principal and surety at the time of its rendition. *The Columbia*, 109 Fed. Rep. (U. S.) 660.

Towage—Injury to Tow—Liability of Tug.—A ship which consents being towed with another vessel to avoid delay, and without any advantage having been taken by the tug, assumes the extra risk of the double tow, and cannot hold the tug liable for an injury she sustains as a result, except on the ground of negligence in the performance of the contract. *The Columbia*, 109 Fed. Rep. (U. S.) 660.

Damages for Delay—Charter Fixing Demurrage as Evidence.—In a suit for collision, where the injured vessel was delayed for repairs, the provision of her charter fixing the rate of demurrage is competent evidence of her actual damages by reason of such delay, and, although it may not be conclusive, makes out a prima facie case in the absence of other proof. *The Columbia*, 109 Fed. Rep. (U. S.) 660.

Services rendered on Board Vessel.—Allegations in a complaint that the services sued for were rendered on board a vessel, and as members of her crew, do not necessarily imply that the vessel was engaged in commerce, and that the contracts were maritime, since they may refer to a force put on board a vessel to care for it, before the vessel has been enrolled or in commission. *Olsen vs. Birch et al.*, 65 Pac. Rep. (Cal.) 1032.

Collision of Tows on Separate Lines.—A tug had two tows on separate lines of different lengths. The shorter line parted, and tug at once reversed, and slackened the longer line, but the tows came into collision, held, that the tug could not be held in fault for its failure to cut the hawser of the rear tow, where its action in reversing accomplished the same result as promptly and effectually. *The Columbia*, 109 Fed. Rep. (U. S.) 660.

Attachment of Vessel.—When the master of a ship causes the same to be seized under an attachment in his own favor against the owner, such conduct will authorize the owner to terminate the employment; but until the employment is terminated by the owner the master continues to represent him with reference to the vessel and its cargo, and may assert the rights of the owner against any one wrongfully interfering with either. *Tuells vs. Torros*, 39 S. E. Rep. (Ga.) 455.

Breaking of Hawser—Inefficient Steering of Tow.—A tug cannot be charged with fault of the breaking of a hawser used for towing a ship, which was of sufficient size, made expressly for its use, thoroughly tested, and guaranteed to be of a strength greater than was necessary, and had been in use but three months, and which apparently broke because of the improper steering of the tow, which placed it under a sudden and unusual strain. *The Columbia*, 109 Fed. Rep. (U. S.) 660.

Responsibility of Tug.—A ship in tow cannot hold the tug responsible for her own failure to follow the tug's course where the latter gave the proper signals to indicate changes of course, the duty of proper steering devolving upon the tow; nor does the fact that her sheering from the proper course could have been seen from the tug impose upon the latter the duty of warning her, where there was no danger not as well known to the ship as to the tug. *The Columbia*, 109 Fed. Rep. (U. S.) 660.

Personal Action.—Where an action is brought against the owner of a vessel by name to recover for services rendered on such vessel, and summons served on such owner, and a personal judgment demanded against him, the action is in personam, and not in rem, though the vessel may be attached to secure the claim. Contracts for services rendered in the construction of a vessel and thereon before it has ever been engaged in navigation are not marine contracts. *Olsen vs. Birch et al.*, 65 Pac. Rep. (Cal.) 1032.

Maritime Contract—Jurisdiction.—Code Civ. Proc. § 813 et seq., providing that all vessels are liable for certain services; that actions therefore must be brought against the owners by name, if known, and the plaintiff may have the vessel attached as security, is not, as applied to contracts not maritime, in conflict with Const. U. S. art. 3, § 2, declaring that the jurisdiction of the federal courts shall extend to all cases of admiralty and maritime jurisdiction, or Rev. St. U. S. § 711, providing that "the jurisdiction of the federal courts in cases of admiralty and maritime jurisdiction is exclusive, saving to suitors in all cases the rights of a common-law remedy where the common law is competent to give it." *Olsen vs. Birch et al.*, 65 Pac. Rep. (Cal.) 1032.

Collision—Vessels in Tow—Negligent Steering.—A ship and a bark were both in tow of a tug on separate lines. The ship was on the shorter hawser, and on the port quarter of the tug. Through inefficient or negligent steering, she failed to follow the course of the tug, but was allowed to sheer to starboard, across the hawser of the bark, and then sheered in the opposite direction, when her hawser parted, and she fell back, coming in collision with the bark, and being still upon or against the latter's hawser, and off her own proper course. Held, that the ship, without whose initial fault the collision would not have occurred, was solely liable for all damages, although the bark may have made an improper maneuver in extremis, and after the collision had become inevitable. *The Columbia*, 109 Fed. Rep. (U. S.) 660.

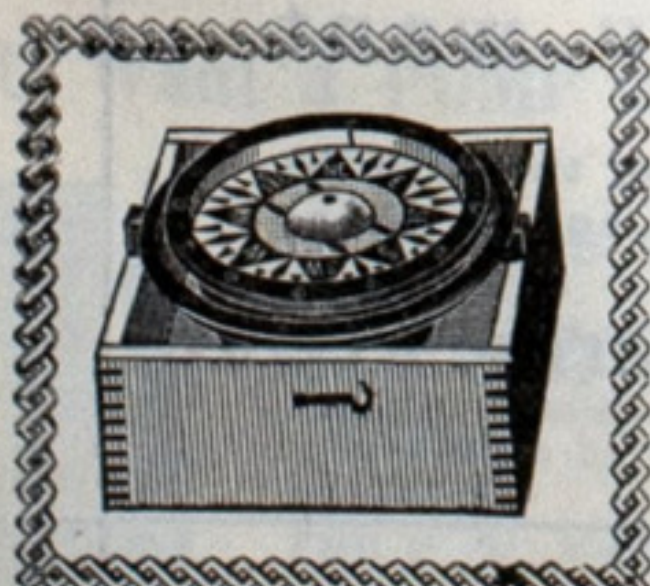


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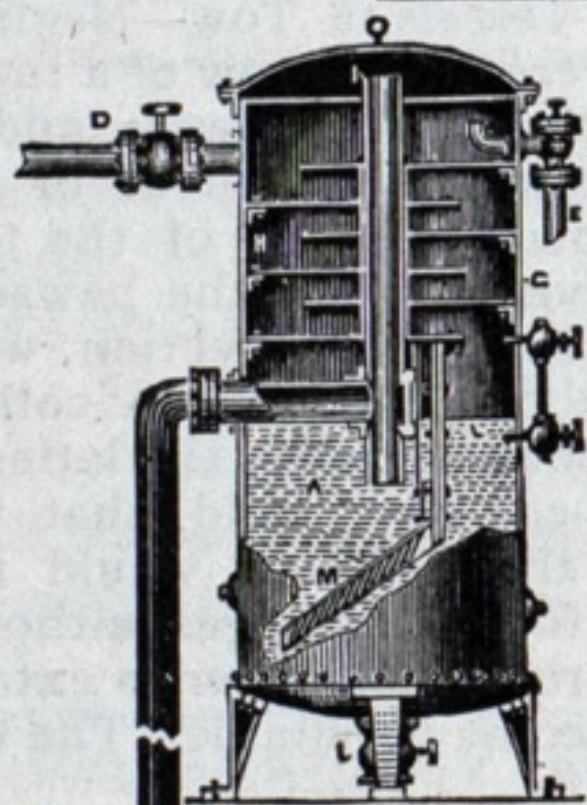
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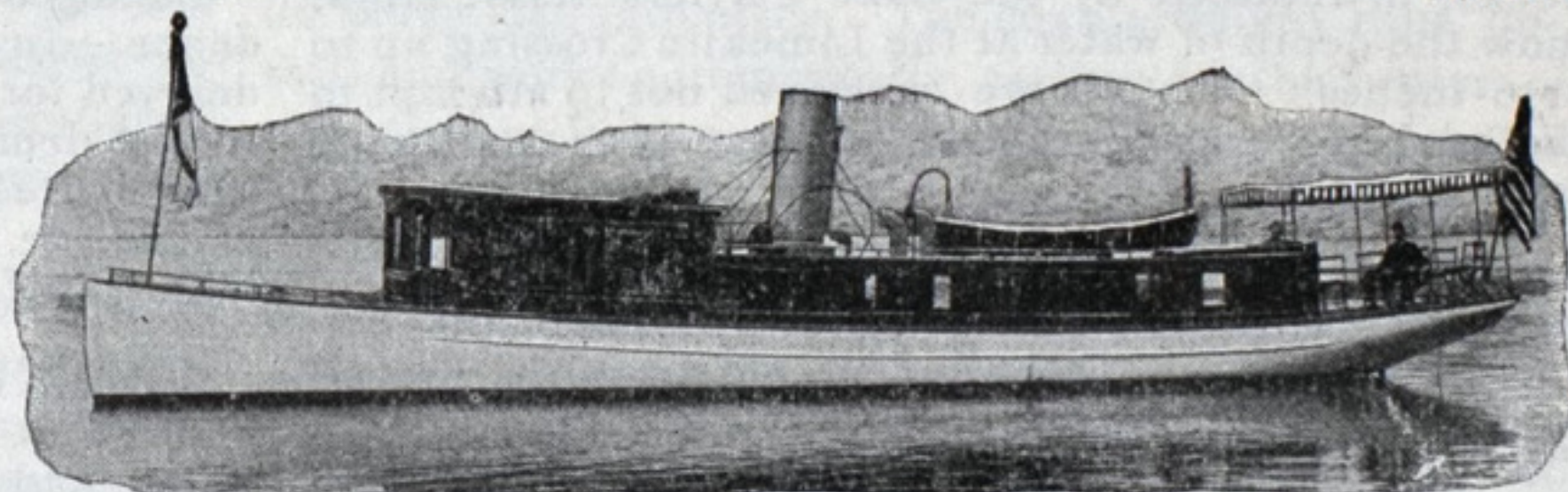
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COMMERCE.

The commercial department of the London Board of Trade has started a series of publications for the purpose of schooling British manufacturers and merchants in the methods necessary for securing first place for British trade in Asiatic Turkey and throughout the Levant. The initial number, just published, says: "Since the attempt made by Germans and Americans to further their trade in the near east by means of sample rooms and museums has proved a failure, now is the time for the British to act."

It is also a time for Americans to act. One of the methods proposed to enable the traders of Great Britain to dominate the vast region between Italy and the Euphrates calls for the ousting of foreign commercial travelers and the elimination of the Levantine middlemen. In order to capture the best markets of the Mediterranean it is proposed to establish reference offices in the principal cities, especially in Constantinople, through which quick communication may be carried on with patrons. It is proposed to man these offices by Englishmen, speaking the language of the several countries concerned. These officials should compile and distribute catalogues and price lists, act as translators and interpreters, instruct drummers in the customs and requirements of the localities they intend to visit, and otherwise promote intercourse between the British producer and the Levantine consumers. No more foreign traveling representatives are to be employed and reference offices are intended to completely supersede native middlemen.

LITERARY NOTICES.

The increasing business of Manning, Maxwell & Moore, New York, has compelled the firm to compile two catalogues and the portly volume illustrating a complete line of railway, steamship, machinists and contractors' tools and supplies is ready for distribution. The pages number 1,056 and are 9½x

12½ inches. A separate edition is issued for metal and wood-working machinery.

We are in receipt this week of a revised copy of sailing directions for Lake Huron, Straits of Mackinac, St. Clair and Detroit rivers and St. Mary's river, published in one volume by the Hydrographic Office, Department of the Navy, Bureau of Equipment, Washington, D. C. Price 40 cents. This publication is one of the most valuable for lake use that has come before our notice. Besides containing all the information received and published by the U. S. Hydrographic Office, there are several special articles, tables, etc., which can be brought into daily use by the careful lake pilot.

Doubleday, Page & Co. announce that their magazine, Country Life in America, has found a welcome of unexpected proportions and enthusiasm. The published announcement has led to orders for more than the first edition and of advance subscriptions from would-be readers in unexpected numbers. One prominent gentleman in New York so approved of the idea as told of in a newspaper that he sent 15 subscriptions for himself and friends weeks before he could possibly receive the first issue. Not only does the idea of Country Life in America appeal to all who love the country, but the name of the editor, L. H. Bailey, of Cornell, gives solid assurance that the magazine will be popular, interesting, beautiful and of high standard. Certainly, no more superbly illustrated magazine has been printed.

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"When is the deep-water canal to Chicago to be opened?" inquired one of the mermaids. Neptune laughed a low, mocking laugh, and then by way of further reply: "If you want to visit the Windy City I don't think that I would wait for the deep-water canal. If the St. Lawrence route is too shoal for you, I would suggest that you clothe yourself in your right mind and a few other things and go over-land?" The mermaid said she was never so much offended in all her life, and abruptly left his presence.—New York Marine Journal.

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For further particulars see
"Passenger Lines on the Lakes,"
page 18.

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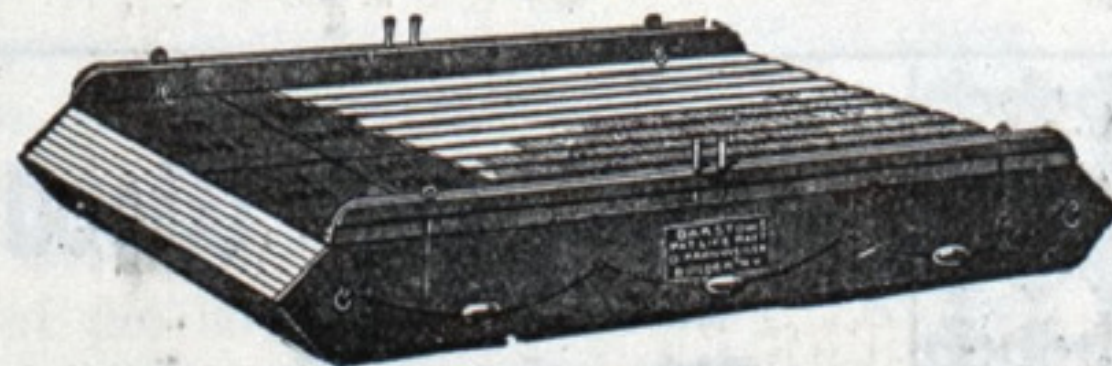
OFFICE OF DEPOT QUARTERMASTER, New York, N. Y., October 23, 1901.—The iron steamer McPherson built in Belfast, Ireland, in 1881, will be sold at public auction at this office at 12 o'clock, noon, November 7, 1901. Following are measurements of vessel above named: Length, 410 feet between perpendiculars; breadth of beam, molded, 39 feet 6 inches; depth of hold, 33 feet; draft forward, light, 16 feet 4 inches, loaded, 18 feet 6 inches; draft aft, light, 20 feet 5 inches, loaded, 22 feet 6 inches; tonnage, by measurement gross 3,699, net 2,277. Main engine built in Rotterdam in 1896. Bids submitted by mail will also be entertained, if accompanied by certified check equal in amount to ten per cent. of amount of bid. The government reserves the right to accept or reject any or all bids. The vessel may be seen at the docks of Morse Iron Works, foot of 56th Street, Brooklyn N. Y. Bids sent by mail must be signed by the bidder, enclosed in sealed envelope marked "Bids for purchase of steamer McPherson," and addressed to F. VON SCHRADER, Major and Acting Depot Quartermaster.

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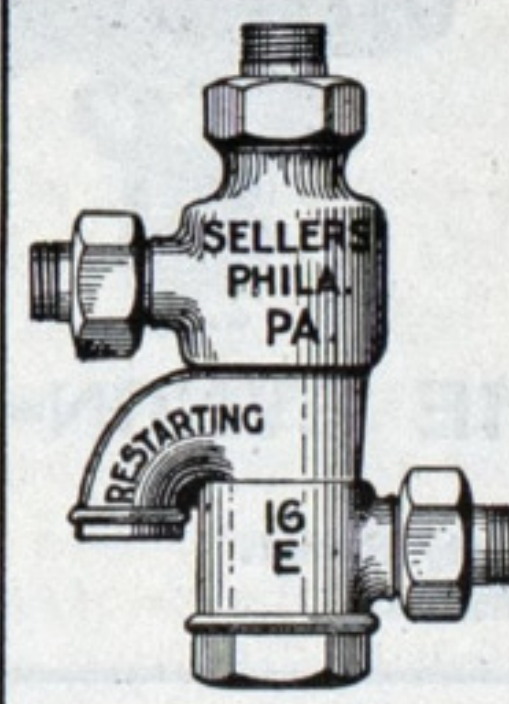


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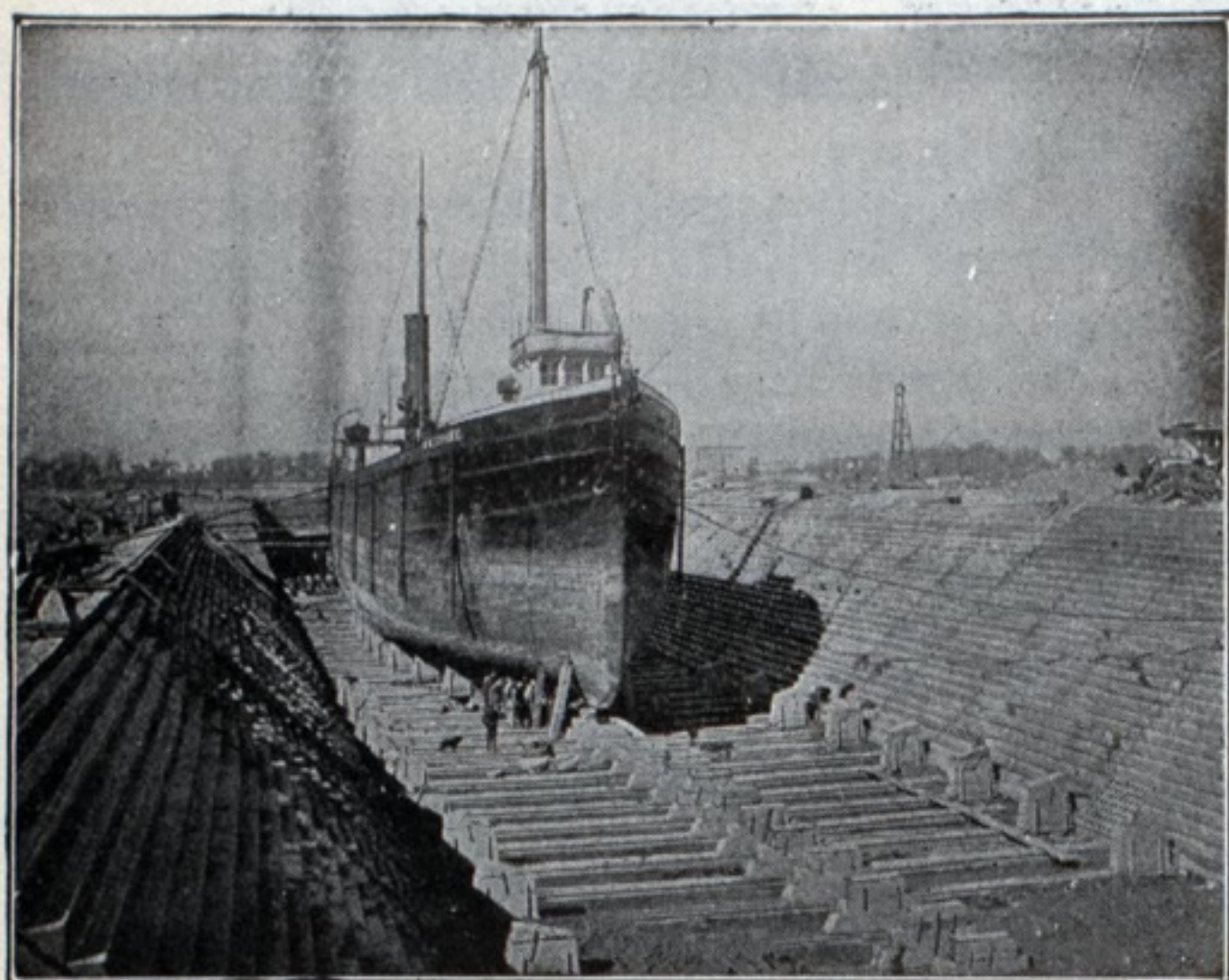
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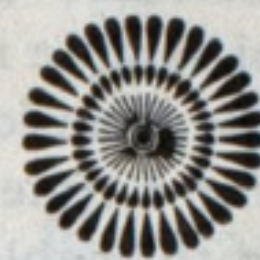
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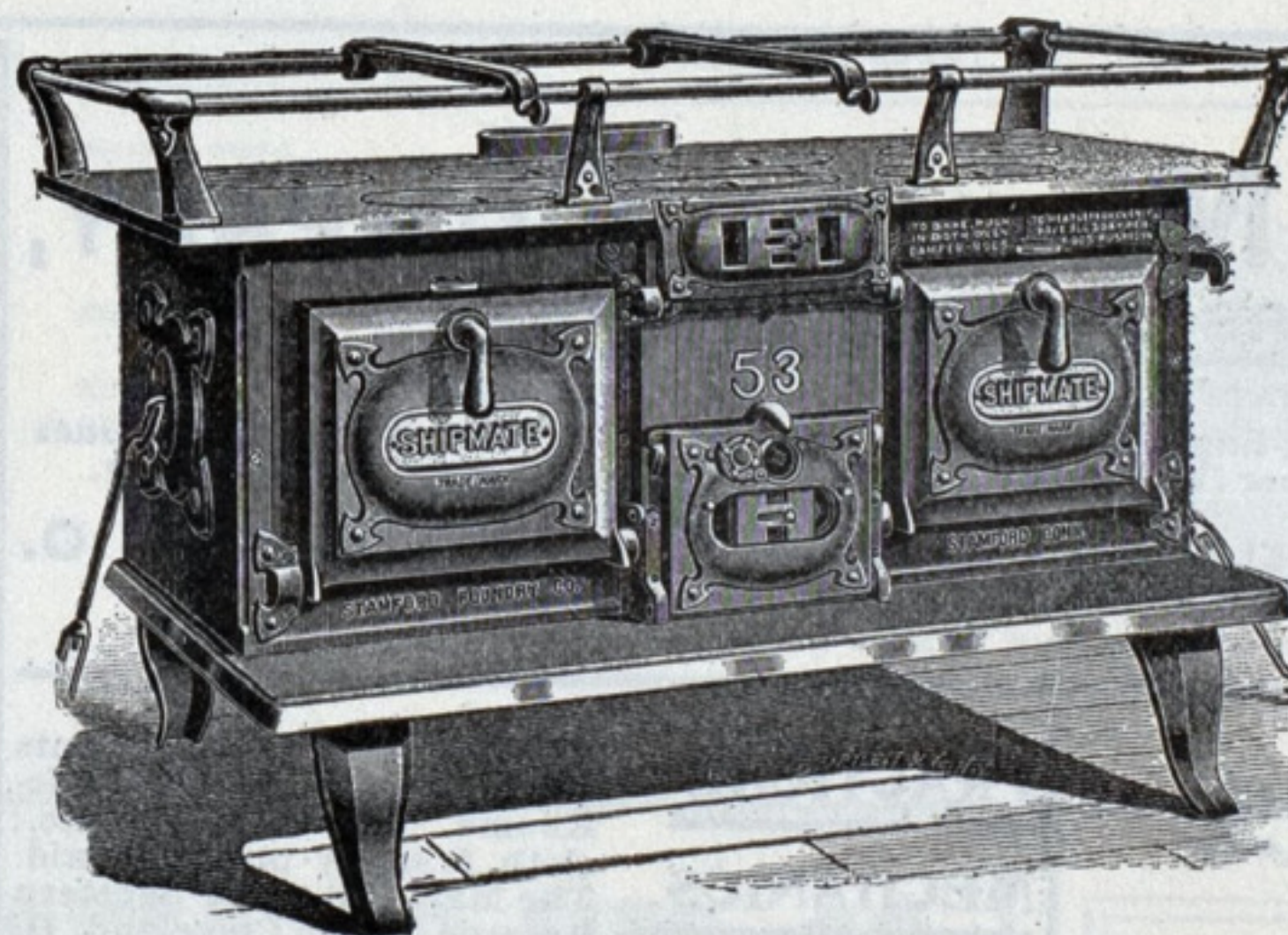
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